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**ECONOMICS**  
AND  
**CULTURAL CHANGE**



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# ECONOMICS

AND

# CULTURAL CHANGE

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## Preface

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Cultural change and economic activity are intimately related. In the everyday world all types of social activity are inseparably intermingled. Facts and events have meaning and are significant only in terms of the total social process. Our aim is to explain the origin and evolution of the present economic system and to show the relationship of any economic system to its enveloping culture. Our theme is cultural change as wrought by economic forces. We endeavor to show how the methods of production shape social attitudes and help control group behavior. We describe the economic institutions of many cultural patterns and explain the part they played in the everyday life of the people. We regard economic activity not as something apart but as an integral element in the social process.

The book is primarily intended to serve as an introduction to the social sciences, particularly economics, sociology, and history. Its purpose is threefold: to trace the evolution of modern industrialism; to evaluate the contributions of each of the preceding cultures; and to study the forces promoting change in modern industrial society itself. Its scope is wide. Its method is historical. Its emphasis is economic. Its point of view is cultural.

The book affords the basis for a broad understanding of the dominant economic forces operating in modern society. The comparison of the rise, development, and decay of previous cultural patterns provides the reader with a historical perspective in terms of which he can more adequately analyze the culture in which he lives. He will begin to appreciate the inevitability of change and to realize the inescapable necessity of judging and controlling the forces producing it.

We gratefully acknowledge our indebtedness to the authors of the numerous standard treatises of both a general and specialized nature upon which we have, of necessity, leaned heavily. We have, of course, been greatly influenced both by our former teachers and by the published works of such men as Sir William Ashley, Harry Elmer Barnes, Miles C. Burkitt, Fay-Cooper Cole, Jacques DeMorgan, Walton H. Hamilton, John and Barbara Hammond, John A. Hobson, George Grant MacCurdy, Bronislaw Malinowski, Paul Mantoux, Henry Fairfield Osborn, Werner Sombart, Arnold Toynbee, and Thorstein Veblen.

We sincerely appreciate the encouragement given us by Dean Charles S. Tippetts of the School of Business Administration at the University of Pittsburgh, and the opportunity accorded us by our colleagues in the Department of Economics, who made it possible for us to test preliminary editions of the book in actual classroom use. Their cooperation has been invaluable. Michael Valerino, an engineering student, made all drawings and diagrams in the book.

RUSSELL A. DIXON,  
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*May, 1938.*

# Contents

	PAGE
PREFACE. . . . .	v

## PART I INTRODUCTION

### CHAPTER 1

ECONOMICS AND THE CULTURAL PATTERN . . . . .	3
I. Economics. . . . .	3
II. Culture . . . . .	5
A. The Concept . . . . .	5
B. Aspects. . . . .	7
III. Social Change . . . . .	9
A. Nature. . . . .	9
B. Invention and Discovery. . . . .	11
C. Diffusion. . . . .	15

## PART II PRIMORDIALISM

### CHAPTER 2

HUNTING CULTURE . . . . .	23
I. Introduction. . . . .	23
A. Why Study Prehistoric Cultures? . . . . .	23
B. Sources of Information. . . . .	23
C. Chronology. . . . .	25



	PAGE
II. Physical Conditions. . . . .	26
A. Climate . . . . .	27
B. Glaciation . . . . .	27
C. Topography. . . . .	30
D. Fauna . . . . .	33
III. Social Environment. . . . .	33
A. Primitive Races. . . . .	34
B. Social Organization . . . . .	36
C. Economic Activities . . . . .	50
D. Emergent Class. . . . .	70
IV. Summary . . . . .	72

### CHAPTER 3

VILLAGE CULTURE . . . . .	77
I. Physical environment. . . . .	77
A. Climate and Topography. . . . .	77
B. Flora and Fauna . . . . .	79
II. Economic Factors . . . . .	80
A. Domestication of Animals . . . . .	81
B. Cultivation of Plants. . . . .	85
C. Manufacture of Implements. . . . .	92
D. Pottery. . . . .	100
E. Textiles . . . . .	104
III. Social Organization. . . . .	106
A. Social Controls . . . . .	107
B. Villages and Homes . . . . .	109
C. Classes. . . . .	114
IV. Summary . . . . .	115
V. Temple Town Culture. . . . .	115
A. Origins. . . . .	116
B. Basic Features . . . . .	117
C. Extent and Significance . . . . .	125

## PART III

### FEUDALISM

#### CHAPTER 4

AGRICULTURAL FEUDALISM. . . . .	133
I. Historical Backgrounds . . . . .	133
A. Origins of Feudalism. . . . .	133
B. English Feudal Development . . . . .	135
C. Feudal Superstructure . . . . .	140
II. The Social Structure of the Manor . . . . .	143
A. Land Tenure . . . . .	143

## *Contents*

ix

	PAGE
B. Classes . . . . .	149
C. Social Controls . . . . .	155
III. The Social Process . . . . .	164
A. Living Conditions . . . . .	164
B. Manorial Routine . . . . .	170
IV. Factors for Change. . . . .	174
A. Commutation of Services. . . . .	174
B. The Black Death . . . . .	177
V. Evaluation. . . . .	180

## CHAPTER 5

URBAN FEUDALISM . . . . .	187
I. Towns . . . . .	187
A. Origins. . . . .	187
B. Structure. . . . .	190
C. Effects on Manorial Life . . . . .	196
II. The Social Structure . . . . .	197
A. Merchant Gilds. . . . .	198
B. Craft Gilds. . . . .	202
III. Social Controls. . . . .	217
A. Gild Rules . . . . .	218
B. Christian Concepts . . . . .	220
C. Religion . . . . .	224
D. Education . . . . .	225
E. Attitudes. . . . .	226
IV. The Social Process . . . . .	229
A. Occupations. . . . .	229
B. Social Relations. . . . .	231
V. Factors for Change. . . . .	233

## CHAPTER 6

COMMERCIAL FEUDALISM. . . . .	238
I. Role of Trade in Feudalism . . . . .	238
A. Reasons for Meager Trade . . . . .	239
II. Local (Petty) Trade. . . . .	244
III. Inter-regional (Grand) Trade. . . . .	245
A. The Crusades. . . . .	246
B. Venetian Fleets . . . . .	261
C. Fairs. . . . .	262
D. Hanseatic League . . . . .	270
E. English Merchants. . . . .	290
IV. Social Controls. . . . .	295
A. Lex Mercatoria . . . . .	296
V. Evaluation. . . . .	298

## PART IV COMMERCIALISM

### CHAPTER 7

THE COMMERCIAL REVOLUTION. . . . .	309
I. Backgrounds. . . . .	309
A. Nature. . . . .	310
B. Promoting Forces . . . . .	311
II. The Process . . . . .	314
A. Phases. . . . .	314
B. Features . . . . .	322
III. Techniques . . . . .	333
A. Exploration. . . . .	333
B. Conquest. . . . .	340
C. Business . . . . .	347
IV. Consequences . . . . .	348

### CHAPTER 8

NASCENT CAPITALISM . . . . .	353
I. Backgrounds. . . . .	353
A. Prerequisites . . . . .	353
B. Aiding Factors . . . . .	356
II. Fields of Activity . . . . .	362
A. Agriculture. . . . .	362
B. Commerce . . . . .	375
C. Finance . . . . .	394
D. The Domestic System . . . . .	398
III. Social Controls. . . . .	403

## PART V INDUSTRIALISM

### CHAPTER 9

THE INDUSTRIAL REVOLUTION . . . . .	417
I. Historical Backgrounds . . . . .	417
A. Aiding Factors . . . . .	418
B. Technical Origins . . . . .	422
C. English Leadership. . . . .	441
II. The Process . . . . .	441
A. Primary Changes . . . . .	442
B. Secondary Changes . . . . .	452
III. Consequences . . . . .	455
A. Expansion of the Market. . . . .	455
B. Urbanization . . . . .	456

# Contents

xi

	PAGE
C. Social Disorganization . . . . .	458
D. Individualism . . . . .	460
E. Government Regulation . . . . .	462

## CHAPTER 10

INDUSTRIAL CAPITALISM . . . . .	468
I. Introduction . . . . .	468
A. General Prerequisites . . . . .	468
B. Specific Prerequisites . . . . .	469
II. Nature of Industrial Capitalism . . . . .	472
A. Techniques . . . . .	473
B. Terminology . . . . .	474
III. Ideology . . . . .	478
A. Gain . . . . .	478
B. Rationality . . . . .	480
C. Competition . . . . .	481
IV. Structure . . . . .	482
A. Features . . . . .	483
B. Metamorphosis . . . . .	489
C. The Corporation . . . . .	492
V. Modern Problems . . . . .	500
A. Unemployment . . . . .	501
B. Distribution of Wealth . . . . .	503
C. Social Security . . . . .	512
VI. Factors for Change . . . . .	516
A. Governmental Regulation . . . . .	516
B. Collectivism . . . . .	520
INDEX . . . . .	541



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## Part I · *Introduction*

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## *Chapter One*

# Economics and the Cultural Pattern

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### I. ECONOMICS

The study of economics deals with the activities of human beings in their pursuit and enjoyment of a livelihood. Included within its scope are four major types of phenomena: first, the productive activities by which the materials of nature and services of man are modified or made available to satisfy human wants; secondly, the ways by which these goods and services are exchanged and passed into the hands of ultimate users; thirdly, the claims upon the total product which owners receive for their property and which labor receives for its services; and, finally, activities associated with the expenditure of income for goods and with the ultimate uses of goods in the satisfaction of personal wants. Economists refer to these four fields as production, exchange, distribution, and consumption. Although practically every economic activity or circumstance can be classified under one or another of these topics, they constitute only a small part of the total activities of man and of the total number of situations conditioning man's behavior. Thus economics is only a small part of a much larger entity called the social order, civilization, or culture. It is unrealistic to conduct the study of economics in an intellectual vacuum which fails to take account of the many non-economic factors that affect man's behavior, that mold



the economic conditions he encounters, and that largely determine the economic problems he must solve. Man's economic activity is affected by social institutions, by group behavior patterns, by geographic and climatic factors, by the body of accumulated knowledge inherited from the past, by the material products of past activity (artifacts), by science and technology, and by a vast array of established habits of thought and action.

Not only are the economic activities of man merely one small part of the whole cultural organization, but all parts of a culture are inter-related; that is, they are interwoven and intermingled in such a way that each influences and conditions some or all of the others. Economics, therefore, must be studied as an integral part of many cultures. Furthermore, the cultural pattern itself must be analyzed to show what influence it has upon economic organization and at what points that influence is brought to bear. The economic factors themselves must also be studied to see their influence upon the other constituent parts of the culture. Even man cannot be studied as something unique and apart from society. He cannot be regarded simply as the resident of an area, the economic conditions of which can be analyzed and evaluated. It is not sufficient to view him as a member of certain special-interest groups, such as the "employer" group, the "labor" group, or the "consumer" group. He is all of these, and more! He must be regarded as a member of the entire social group which is organized and functioning in a specific cultural pattern. He is born into it and must accept its organization although he had no part in creating it. He is subject to the cumulative impact of all its many and varied influences.

The cultural approach to economics must be historical in method so that we may understand the origins and development of our modern institutions. It must give an account of previous cultures and explain the process of cultural change as a background for the understanding and evaluation of our present culture. It must be critical in attitude

in order for us to evaluate the adequacy or the inadequacy of each cultural pattern to meet the problems of its time and place. Its basis of evaluation must be the welfare of the whole group rather than the pecuniary gain of the individual. The cultural economist must draw his materials from specialists in many and diverse fields. Not only must he rely upon the historian and the geographer, but he must also consult the sociologist, the anthropologist, and the geologist. He must view economic organization in its historical perspective as well as in its actual social setting.

## II. CULTURE

Culture is a complex and dynamic concept which can be studied from many viewpoints. It includes the sum total of human relationships existing at a given time in a given place. It refers to the organized life of a group functioning under the conditions of a given environment. From another point of view a culture is a distinctive organization of society in which the various integral parts form a meaningful and homogeneous pattern.

### A. THE CONCEPT

Perhaps the nature of culture can best be understood by studying its distinguishing characteristics. In the first place it is distinctively and exclusively human. The three great achievements of man which have enabled him to develop an elaborate culture are language, writing, and printing. Until he had acquired the physiological attributes of speech and a mind capable of profiting from experience he was not truly human and did not have a cultural organization. Until writing was invented culture was passed on from one generation to the next through the oral tradition. Writing so greatly increased man's powers to accumulate tradition and knowledge that, until recently, history was supposed to have begun with this significant invention. Printing has been the last great step in speeding up the process of

preserving the knowledge of past generations and making it available to the current one. The second characteristic of culture is that it involves an integrated group. A culture is something more than the sum of its parts. The pattern which the parts produce is a distinctive aspect of it. Thirdly, culture is largely psychological, that is, its pattern is not so much a result of the integration of material items as it is a result of the beliefs, attitudes, and traditions (called the ideology) of its members. Fourthly, it is supra-individual in the sense that while each individual is a culture carrier, the culture itself is not dependent upon any given individual. Culture, like population, continues even though none of its original individual bearers are living after the lapse of a hundred years. Fifthly, culture is non-biological. Not a single item of culture is carried in the germ cells of any individual. The physical structure of the most primitive peoples is not observably different from that of the citizens of the most highly developed civilization. Even the purely physical and natural environment is often identical. The natural resources were all present in western Pennsylvania when the Indians were there but no coal or iron industry existed. Finally, culture develops, changes, and spreads by the two fundamentally human processes of invention and diffusion. These characteristics will become more evident as we proceed with the analysis of certain representative cultures which have bound large groups of the earth's inhabitants into functional organizations.

There are two *basic elements* in every culture: man and nature. Man must live in some kind of natural setting. In early times it was a harsh and unmodified physical environment to which man adapted his mode of life. In recent decades man has modified the natural setting so greatly in certain urban regions that the original contours of the land are no longer recognizable. Out of the basic elements of man and nature there has risen during the centuries one culture after another each having its own distinctive pattern of physical, social, intellectual, and religious elements.

The cultural pattern, however, is more than the aggregate of these and other aspects. All must be inter-related in such a way that they form an integrated and unified whole. All parts must be consistent with the general pattern. They must fit together to make a complete pattern in the same way that the pieces of a jig-saw puzzle must all fit together to make a unified picture. A box containing an assortment of odd and queerly shaped pieces of wood does not constitute a jig-saw puzzle, unless the pieces can be assembled into a meaningful whole. Every piece must have a distinct place and must contribute to the ultimate design. If we take ten pieces from each of five puzzles which contain fifty pieces each, we shall have the correct number of parts but they will not constitute a new picture puzzle. The pieces cannot be assembled into a new design because they are not homogeneous. They do not bear any consistent relationship to each other, and they cannot be assembled into any intelligible pattern. It is much the same with a culture. A mere aggregation of traits does not constitute a culture. The traits must be consistent with the prevailing ideology or core of beliefs and must, furthermore, be integrated into a functioning entity. A culture is a process as well as a pattern.

## B. ASPECTS

From a structural and functional viewpoint culture consists of two parts: the social milieu and the social process.

1. **THE SOCIAL MILIEU** is the sum of the factors which condition man's behavior; it is the totality of the forces which impinge upon an individual or a group and in terms of which behavior becomes meaningful. The nearest English word which is roughly equivalent to the French term "milieu" is "environment." It is not a very satisfactory synonym because it seems to have acquired the connotation of physical things like geography, topography, and climate. The milieu, however, includes intangible as well as physical things. In fact, the milieu itself is made up of two distinct

but inter-related parts: the physical environment and the social environment.

a. THE PHYSICAL ENVIRONMENT consists of all the non-human aspects of culture. All the materials and forces of nature and all the material products of man's economic activity are its elements. Climate, topography, and natural resources are the chief items in the physical world. Of course natural resources include not only the inanimate things such as minerals, water, and land but all the animate items except man. Plants and animals are all included in this broad category. But the physical environment also includes the material products of man's activity. Buildings, streets, pipe lines, machines, and other items, which are merely modified forms and combinations of naturally existing elements, are the products of man's activity and depend for their maintenance upon him. These and all other material products of human effort are a part of the physical environment. These obvious and tangible parts of the social milieu are not the most important elements of a culture however.

b. THE SOCIAL ENVIRONMENT is the part of the social milieu which gives a culture its distinct characteristics. It is composed of man in his complex and varied relationships. It consists in part of actual persons but not as a mere aggregation of men. The social environment finds expression in special-interest groups, institutions, social controls, science, technology, attitudes, the social heritage and many other aspects of a society. The social environment consists of all the more ethereal, psychological, and evasive forces of a culture which find expression in and give meaning to the physical aspects. The whole milieu, physical and social, constitutes the matrix in which a given culture operates.

2. THE SOCIAL PROCESS: The actual operation of a culture, that is, the actual functioning of the cultural pattern in the everyday lives of people, is a dynamic thing. It is the *social process*. It involves actions and reactions—behavior. We might define it simply by saying that the reaction of

individuals and groups to their social milieu is the social process. All human activities are part of the social process, but from the economic point of view its most important forms are occupations, social controls, and the making and diffusion of technological changes. The social process is culture undergoing application and change.

### III. SOCIAL CHANGE

Our present culture grew out of earlier ones by a process of change. Sometimes the changes in the cultural pattern were so slight and were made so slowly that they were practically imperceptible. Such gradual changes may be described as "evolution." At other times the changes were more significant and were made with greater rapidity. When a very fundamental change is made with great relative rapidity it may be called a "revolution." This may be the brief but intense culmination of social and political forces expressing themselves in the military overthrow of a government or it may be the deeper and more pervasive changes which attend the introduction of new economic or technical methods in everyday human relationships. From a cultural standpoint the political types, such as the French Revolution, are not nearly so significant as the economic ones, such as the Commercial Revolution and the Industrial Revolution. A revolution does not constitute a break in the cultural stream; it is simply an acceleration of the rate at which change occurs. The continuity of social change is the most enduring feature of culture. There has never been a hiatus in the evolution of culture. The culture of today grew out of the culture of yesterday and will give rise to the culture of tomorrow. Every culture contains within itself not only the elements which will cause its own disintegration but also the seeds from which a new pattern will flower.

#### A. NATURE

Any maladjustment between an individual and his environment constitutes a problem and as such calls for

solution. There is a constant maladjustment between the wants and desires of individuals and the actual situations in which they find themselves. Human wants increase steadily while the means of satisfying them (wealth) are scarce and can only be increased by human effort. This discrepancy between what they have and what they want stimulates people to modify their environment and produces the economic system. The cultural pattern not only sets up the problem but it also limits the individual in his efforts to reach a solution. It imposes upon every individual a great complex of accepted thought patterns, traditional techniques, and established behavior patterns which guide his thinking along familiar channels and inhibit his behavior at many points. This tends to restrict the finding of solutions which depend upon new, rather than familiar, channels of thought.

That part of a culture which is inherited from the past is known as the social heritage. It acts both as a limiting factor and as an accelerating influence in social change. One generation may not inherit from its predecessor enough scientific knowledge and equipment to enable it to make certain types of inventions. Again, it may inherit the knowledge and equipment but they may be associated with certain beliefs and attitudes which preclude their use in certain ways. The social heritage thus limits the kinds of innovations which are possible, because of the nature and restrictions of its content. On the other hand, since it is a constantly accumulating body of knowledge and equipment it presents each new generation with a larger body of materials to work with than the last generation enjoyed. Since inventions are simply recombinations of familiar factors in new ways it is obvious that an increase in the number of known factors produces an increase in the number of possible ways in which they may be combined. It is an actual fact, substantiated by the patent office, that inventions are being made at a rate which is constantly accelerating from decade to decade.

The human species has a facility for manipulating the material environment and for making new combinations, that is, for experimenting. Most individuals, of course, merely accept conventional solutions, but there are always some who do not. They have vivid imaginations and try new ways to solve old problems. These persons are inventors whether their efforts are employed in the physical or the social field. Sometimes these inventors are looked upon as being "queer" or crazy. This is particularly true if their innovations are in the social field, where the forces of custom are unusually strong. But sometimes these persons are regarded as superior. This is more likely to be true if their efforts are devoted to the mechanical field and if they produce a commercially successful device.

Whether these inventors, of both types, are really superior persons, or are merely individuals more advantageously situated than others with respect to observing new problems and making new combinations of factors, is an interesting but unanswerable question. Nevertheless, the history of the race clearly indicates that the greater the amount of material at hand with which to attack a problem the more likely it is that new solutions will be attempted. Sometimes an attempt to solve one problem actually results in a solution for a different one. Carborundum, for example, was invented while trying to produce artificial diamonds.

## B. INVENTION AND DISCOVERY

An *invention* requires the establishment of old elements in a new relationship but discovery simply requires the perception of already existing relationships. Invention consists of two distinct phases. The first step is the establishment of new relationships among the available materials. This may be simply the random attempt of a housewife using a hairpin to make some appliance work or the carefully controlled series of experiments by a staff of technicians in a research laboratory. Of course, these attempts may fail to solve the problem and no invention may result.



However, when at last some combination does accomplish the desired end the second stage in the process of invention has been reached. This second step consists of the recognition of the significance of the new device as a solution to some problem. Sometimes this is first perceived by someone other than the experimenter. When an invention results from systematic, experimental effort the experimenter himself is usually quick to perceive its applicability and significance. But when something new results from experiments of an undirected or unplanned sort, a bystander may be the first to perceive its applicability to some problem.

This perception of the significance of something is, by itself, merely a *discovery*. One who discovers a continent or trade route does not establish the relationship of land and sea or valleys and mountains but he perceives their significance in aiding man or adding to his knowledge. In pure discovery nature establishes the relationship and man merely perceives their significance. But all inventions have the element of discovery inherent in them and many times this phase is the work of a non-experimenting individual. Discovery is more passive and less creative than invention but it is a vital element in producing social change.

The role of *genius* in the inventive process is often assumed to be a determining factor. Of course, invention and discovery are facilitated by genius but they are not dependent upon it. Rather genius, like invention itself, is limited by the experiences of the group and by the social and technological heritage of the prevailing culture. The problems at hand are the guiding force in all social change. It is highly improbable, if not impossible, that an improvement in electrical motors would be made in China. Where such a thing is little used there are no problems concerning its operation or improvement. It is even unlikely that automobiles would be improved or a new one invented in a large Chinese city although they are in common use there. The social heritage and thought patterns of the Chinese, steeped in ancestor worship and tradition, prevent the

average Chinese from being sensitive to mechanical problems. To them the automobile is a borrowed cultural trait and not an integral part of their culture. Invention occurs most easily where the population is habituated to the use of an article and where attitudes favor change. With a given amount of mechanical devices in widespread use, variations and new relationships become highly probable and usually occur with increasing frequency. The failure of technical equipment to perform to the complete satisfaction of all users will create problems and stimulate a desire on the part of many to improve it. Some will experiment with apparatus in an attempt to create more satisfactory performance. Others, not possessing the ability or opportunity to experiment, will become conscious of the problems and will be alert to possible solutions. Sooner or later, the significance of new relationships arising out of everyday use or resulting from deliberate experimentation will be perceived by someone and an invention will result. Such a person may be considered a genius. This is likely when he gains a reputation for his alertness in making improvements which the group accepts and finds especially satisfactory. A genius, therefore, is merely the one who is first to perceive or produce a change which in the course of events would probably have been inevitable. If one of marked ability like an Edison or a Steinmetz had not lived, society might not have enjoyed all its present electrical devices but someone would doubtless have invented similar ones eventually.

Even though individuals may discover or invent new ways of solving problems the cultural pattern may not be changed by them. It will not be modified until the problem has been clearly perceived by many members of the group, and until the group as a whole has become willing to accept the new solution. The *group thus acts as a selective agent* in social change. An invention becomes a social change only when it becomes a part of the cultural pattern either by fitting into it or by modifying the cultural pattern to fit

itself. Sometimes an invention is accepted very quickly but sometimes the process takes many years. Those which have to modify the cultural pattern to fit themselves are usually accepted much more slowly than those which fit neatly into it. An inventor whose ideas were accepted very slowly by society is frequently characterized by later generations with the phrase, "He was ahead of his time." His own generation may have repudiated him for being "impractical and visionary."

Whether an invention produces a change in the cultural pattern or not depends upon the degree to which it becomes incorporated in the behavior patterns of the group. How readily other members of the group will accept the new method will depend upon a great number of factors of which the more important are: a consciousness of the problem; established customs and prevailing beliefs; and, perhaps most important, economic interests. Suppose an invention consists of a glass chimney for an oil lamp. The result will be a brighter and steadier light. How readily will the friends and neighbors of the inventor accept this new way of solving the problem of artificial light? To begin with they will have to be alert to the problem and convinced of the superiority of the new as compared with the old methods of solution. They will also have to find the new method in accord with the patterns of their everyday lives.

If one neighbor is accustomed to hard manual labor in the field, is illiterate, and finds bed the most desirable place when sunset stops his work, he will not be conscious of the problem of better artificial lighting and the invention will in no way change the routine of his daily life. But suppose another neighbor is literate, enjoys reading, and is forced by the prescribed routine of his occupation to confine his reading to night hours. Will he accept the new invention as a factor contributing to the better enjoyment of his evenings? If he is superstitious about the use of glass, believing it an ill omen and a cause of bad luck, he may continue his old habits without change. His emotional

beliefs may prevent him from increasing his reading pleasure.

Still another neighbor may employ artificial light to enable him to write verses in the evening hours after sunset. Will he welcome the new light as an aid to his amateur endeavors? His economic interests may cause him to regard the use of coal oil as unpatriotic. He may argue that since it is imported the purchase of it sends money out of the village and thus injures the candlemaker's gild, of which he is a member. He may not only refuse to use the new device but he may exert every effort to have the public officials suppress it as a device dangerous to the public welfare. He may even talk so eloquently of the social welfare, and so skillfully avoid any mention of the candlemaker's gild, that his own economic interest in the matter may pass without notice. Of course, if he fails to have the device suppressed, other neighbors of the inventor who are conscious of the problem, whose customary behavior patterns are not inconsistent with its use, whose beliefs are not in conflict with it, and who have no economic interests to serve may begin its use. Following their example others may gradually accept the device until it becomes an established part of the cultural pattern of that group.

### C. DIFFUSION

1. TYPES: Diffusion is a technical term used to describe the process by which an invention or discovery becomes a part of the cultural pattern. Diffusion is the indispensable factor which gives invention its social significance. An invention which dies with its inventor is of no social consequence regardless of how ingenious or desirable it may have been. There are two types of diffusion.

*Primary diffusion* is the acceptance of an invention by the cultural group in which it was made. We have already described the factors influencing the acceptance of a simple invention by the immediate neighbors of the inventor. In our modern world primary diffusion is much

more complex and the area affected is wider. Modern advertising and other sales methods are often used to persuade the group to accept and use a new device, such as a vacuum cleaner or a radio. These same forces are often successfully used to oppose the adoption of a new product.

*Secondary diffusion* is the spread of a cultural trait from one large cultural group to another, such as from the United States to Japan. This phase of diffusion is conditioned by the degree of similarity between the social milieu of the inventing group and that of the borrowing group. Of course, the chances for conflicts between the cultural patterns of the two groups are far greater than for conflicts between the behavior patterns of two individuals both of whom are living under the same cultural pattern. The physical environment, language, social heritage, and the extent of the technological base are only a few of the many factors which condition the rate and degree of diffusion between cultural groups.

2. **THE PROCESS:** Invention and diffusion constitute the process by which most social change takes place. Sometimes, however, nature initiates social change. An earthquake, tornado, or flood may completely disrupt the physical and social pattern of a given area and sweep away established economic interests and traditional thought patterns. Of course even then the real change comes in the rebuilding process. Those who direct this process find it easier to incorporate the newer ideas of inventors or of other cultural groups since opposing interests in old arrangements have been largely destroyed. However, the nature of social change is not determined by its origin.

3. **PROGRESS** is the term ordinarily used to characterize changes which are believed to improve a situation. Obviously, all progress constitutes change but all change is not progress. *Progress is an interpretation of change* and not an inherent characteristic. Social change can only be termed progress when it results in more nearly attaining some

goal or objective. The invention and acceptance by the group of a lamp more nearly approximating sunlight represents progress only to those who regard sunlight as the best type of illumination. To those who believe that the ultra-violet rays of sunlight are detrimental to health, the invention and use of a lamp producing them would be a change not toward but away from their goal of good health. The same change would therefore be interpreted as progress by persons with one goal or objective and retrogression by those with a different one. Of course, group acceptance of an invention is ordinarily taken as *prima facie* evidence that it is progress. People do not usually behave in a way which they know or believe will hinder the attainment of their aims and ambitions. Economists talk about the self-interest of the individual as the guiding factor in his behavior. Self-interest is merely their term for an individual's goal. Social goals are merely objectives which groups strive for in the social process.

Social goals are found in the ideology of a culture. In the great majority of instances they are accepted uncritically by individuals in the process of "growing up" or fitting into the cultural pattern. In industrial America the acquisition of money is considered progress since a materialistic goal is a part of our capitalistic ideology. Likewise, the development of faster automobiles is considered progress since speed is usually accepted as an evidence of efficiency. "Time is money" expresses a part of our ideological background which determines our attitudes toward many seemingly unrelated phases of our culture.

Individual goals are usually conditioned by the general cultural framework. They consist very largely of the desire to achieve those personal attributes or possessions which cause a person to be considered successful by his fellow men. Progress, therefore, is an interpretation of the changes which grow out of the complex social process. Change is inevitable, progress is desirable.

In order to understand more adequately the inter-relations of the cultural forces and the economic activities of man we shall study a series of great cultures from an economic point of view. Our aim is not to study culture or cultural change as such. Rather it is to study culture as the background or conditioning framework of economics. As we have seen, culture embraces every phase of the physical and social environment. It embraces the social process in which man not only struggles to make the environment satisfy his wishes, but in which his wishes and efforts are being constantly shaped and changed.

Culture is all-embracing. Our concern is to analyze it not completely but only as it bears more or less directly upon the economic life of man. At all times we shall endeavor to see man's attempt to gain and to enjoy a more bountiful livelihood as an aspect of his larger activities as a member of society. By studying four great cultural patterns we shall see man rise from the bewildered and puny pawn of nature to the master of his physical environment. By viewing this fascinating drama from the standpoint of man's efforts to satisfy his wants we shall see how culture has set the stage on which man's economic efforts play a constantly more significant role.

### STUDY QUESTIONS

1. With what types of human activities does economics deal? From what points of view may these same activities be studied? How does the cultural approach to economics differ from others?
2. What is culture? List and discuss its distinguishing characteristics. What relationship exists between economic organization and culture? Between an individual and culture?
3. What are the basic elements of a culture? How are they related? What is meant by integration? What determines the scope and limits of your relationship to the present cultural pattern?
4. What is the social milieu? What are the chief factors in the social milieu? Which is the more important in explaining industrialism? Why? How are the social milieu and social process related?
5. Why is the social process the dynamic aspect of a culture? What goes to make up the social process? What is a behavior pattern? List and

evaluate ten typical behavior patterns which you can observe among your fellow citizens today.

6. How does an invention differ from a discovery? Which is the more important in modern industrialism? Why? What is meant by the "technological base"? How does it condition invention? What part does genius play in the inventive process? What is meant by the relativity of genius? What agency has largely assumed the functions of genius in modern industrialism? Why?
7. Why is group acceptance an essential part of invention from the cultural point of view? Evaluate the factors affecting the acceptance of an invention. What is meant by social change? In what sense is it inevitable?
8. What is meant by diffusion? What factors condition its rate? How is it related to borrowing? Is diffusion more rapid between America and Europe than between America and Asia? Why?
9. Differentiate progress from change. What cultural factors are most significant in conditioning social progress? The rate of change?
10. What is the meaning of the term ideology? Compare our ideology with that of some other group or time. Which is superior? Upon what basis did you make your evaluation of superiority?

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## Part II · *Primordialism*

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## *Chapter Two*

# Hunting Culture

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### I. INTRODUCTION

#### A. WHY STUDY PREHISTORIC CULTURES?

It is to the study of prehistory that anyone who would trace the evolution of modern society must turn. As an eminent anthropologist has well said: "During this [the Paleolithic] age the rudiments of all modern economic powers of man were developed: the guidance of the hand by the mind, manifested in his creative industry; his inventive faculty; the currency or spread of his inventions [diffusion]; the adaptation of means to ends in utensils, in weapons, and in clothing." Indeed it is to prehistory that the economist must turn if he is to understand the origins of some of the most enduring aspects of our modern economic life. In the cultural setting of Paleolithic times the process began which has grown to man's present domination of the earth and its resources.

#### B. SOURCES OF INFORMATION

Prehistory refers to that period of time before the invention of writing. For this reason it is impossible to study the "original written documents," which is the approved method in historical research. It is to an entirely different set of data that we must turn in order to gain an under-

standing of the earliest economic efforts of man. There are four chief sources from which all that we know of prehistoric man has been drawn. Artifacts, fossils, documents, and living primitives are the source materials of the anthropologist and cultural economist.

1. **ARTIFACTS** are objects bearing evidence of man's activity. They constitute the richest source of information. Stone implements and weapons; engravings and paintings on the surfaces of rock shelters or on smooth cave walls; carvings on bone and wood; vessels formed of clay, such as pottery; charred remains of campfires; and even bits of woven fibers are but a few of the many items classified as artifacts. Artifacts are especially significant because they usually indicate the type of human activity which produced them. The abilities, techniques, and many of the economic activities of primitive groups can be learned by studying them.

2. **Fossils** consist of any remains, impressions, or traces of plants, animals, and man preserved in the rock strata of the earth. Some of the most common fossils are the impressions of leaves and the shells and bones of animals. For the anthropologist such fossils may have little significance. Their importance depends upon their relation to man. When found in the same stratum as human remains, these fossils help to explain the environmental conditions surrounding prehistoric man. The bone remains of man and associated animals are the most meaningful. These give the key to other fossils and are the basis for much of our knowledge concerning prehistoric man.

3. **DOCUMENTS** are usually written records. However, from the functional point of view any mark or inscription which serves to convey an idea may be termed a document. In this sense many of the inscriptions in caves and on cliff walls are documents. They are most valuable as a means of locating the places where primitive man is supposed to have conducted magical rites and ceremonies.

4. **PRIMITIVES** are isolated groups of peoples now living under conditions similar to those which surrounded pre-historic man. These current primitives have been the subject of intensive investigation during the past three decades and offer one of the best means of checking the accuracy of theories concerning the life and work of pre-historic man. The Malaysians found in the Andaman Islands, the Melanesians on Trobriand Islands off the coast of New Zealand, and the Australian aborigines have all been and still are, the subject of investigation. The anthropological studies of primitives have done more to discover and clarify the origins of economic and social institutions than the researches in any other field of endeavor.

### C. CHRONOLOGY

The earliest human societies were crudely organized efforts to combat the great forces of nature. Man was little advanced over the animals and one generation received very little knowledge or equipment from the preceding one. Definite levels of cultural advance can be distinguished but these are so long that it is difficult to comprehend the extreme slowness with which human progress was made. The 325,000 years of the Paleolithic Age can be divided into the Lower, Middle, and Upper periods. Research students distinguish six subperiods. The name and approximate duration of each subperiod is as follows:

Lower Paleolithic	
Chellean.....	150,000 years
Acheulean.....	100,000 years
Middle Paleolithic	
Mousterian.....	50,000 years
Upper Paleolithic	
Aurignacian.....	10,000 years
Solutrean.....	5,000 years
Magdalenian.....	10,000 years

These divisions are based upon evidences of man's cultural progress as shown by his tools (typology) and by

his physical structure (race). The great changes were probably the result of the migration of groups from one part of Europe to another, the discovery of new materials for tool making, and the changing character of the plants and animals.

Although man's cultural pattern as expressed by his techniques, tools, mythology, and magic accounted for the direction and type of change during each major stage, the great changes of the period were caused by changes in the physical environment. We shall first examine the larger forces of the physical world which set the stage and limited the direct economic efforts of man. These we shall view from the vantage point of modern times but we must keep clearly in mind the fact that to any individual, or even to whole generations at that time, these great changes did not appear significant. When we remember that even the shortest of the six periods covers a span of time nearly as long as that from the beginning of recorded history to the present, it is evident that man was not conscious of the control exerted by these changes. To any generation the physical environment was a constant factor but to the student of cultural evolution these slow changes in the natural world are forces modifying the whole trend of early man's climb from primordialism to industrialism. We cannot stress too strongly the importance of maintaining a relative sense of historical perspective in the study of the evolution of modern society. This is especially necessary when studying man's earliest efforts to gain a livelihood and to modify the forces of nature to suit his wishes.

## II. PHYSICAL CONDITIONS

Our first task will be to study the changes in climate and topography which modified the continent of Europe and prepared the stage for the appearance of the earliest economic endeavors of man. Then we shall turn our attention to the social aspects of man's environment—to his techniques, his tools, and his thought patterns.

## A. CLIMATE

Climate was a primary factor in conditioning the cultural pattern of prehistoric peoples. Not only did it affect man directly and force him to seek protection in rock shelters and in the use of animal skins as bodily raiment but it also affected him indirectly by conditioning the available food supply in both amount and variety, by determining the type of materials available for weapon and implement making, and by influencing the range of his hunting activities. It is perhaps no exaggeration to say that climate was the largest single force with which man had to cope.

Climate is a broad term used to denote the condition and content of the atmosphere. Its two chief variables are *humidity and temperature*. Time is the important factor in determining the effects of these variables. From day to day the temperature may fluctuate sufficiently to cause physical discomfort, and humidity may vary from extreme dryness to actual precipitation in the form of rain or snow. From season to season fluctuations are even more pronounced but over longer periods of time the seasonal variations assume cycles which are characterized by a tendency toward one extreme or the other. Seasonal variations still occur but the range of variation moves from one to the other end of the possible scale. In these major sweeps relatively slight but persistent shifts in the mean variation can produce marked effects ranging from glaciation to desert aridness. Glaciation appears to have been the major climatic factor in modifying the continent of Europe long before and again during the early history of human activity.

## B. GLACIATION

Until late in the nineteenth century geologists believed that at one time an immense ice cap covered all the northern hemisphere and that with its disappearance recorded history began. More recent investigations have shown that at least four major periods of glacial advance occurred.



Instead of one general ice cap moving from the north, there were at least four advances of glacial ice sheets from the mountainous regions into the lower valleys and out into the plains. These advances affected the whole contour of what is now Europe.

The glacial periods are named after four Alpine rivers where the evidence concerning them was first investigated.

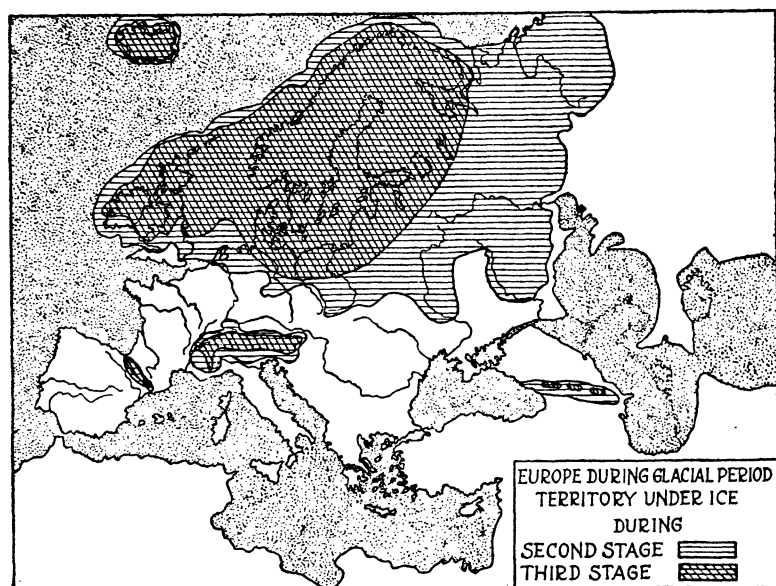


FIG. 1.—GLACIATION IN PREHISTORIC EUROPE

Glaciers and vast seas surrounded the earliest inhabitants of Europe. To the men of many generations these mighty forces of nature appeared as constant and normal elements of the physical environment.

An interglacial period is known by the compound name derived from the periods immediately preceding and succeeding it. (1) The first, or *Günz*, glacial period appeared in Europe more than a half million years ago and lasted about 50,000 years. The Günz-Mindel interglacial phase extended over a period of 75,000 years. (2) The second, or *Mindel*, glacial period marked the greatest advance of the ice sheets into the valleys and plains of Europe. The Mindel-Riss interglacial period was even longer than the first. During

its 100,000 years a few hardy ancestors of man (Piltown and Heidelberg man) are supposed to have followed a migrating host of large animals into Europe. The scarcity of evidence makes it difficult if not actually impossible even to hazard a guess as to their fate. (3) The third, or *Riss*, glaciation was much less severe than the second but covered about the same period of time, or about 50,000 years. It was during the extremely long Riss-Würm interglacial period that the first men are believed to have inhabited Europe. Its 250,000 years cover roughly the Lower Paleolithic period. (4) The relatively mild *Würm*, or fourth glacier, did not drive man from Europe but rather into the rock shelters on the sunny sides of hills. Its span of 50,000 years coincides with the Middle Paleolithic period. (5) *Post-glacial times* began with the recession of the Würm glaciers and extends to the present. It covers about 60,000 years and includes the wonderful advances in human culture known as the Upper Paleolithic as well as all more recent cultures.

To the cultural economist glaciers, as such, have little significance. Ice accumulated so slowly in the mountainous regions and moved at such an imperceptible rate down the valleys and into the plains that its action was scarcely discernible by men of any generation. When we remember that the period during which ice formed and retreated in the Würm (fourth) glacier was ten times that from the building of the pyramids of Egypt to the present day, it is obvious that glaciers affected man's economic activities very gradually. Probably glaciers were looked upon by Paleolithic man as a constant and natural condition. Only in the folklore of the group was the coming or passing of the ice a realized event. But over a vast span of time glaciers conditioned the type and distribution of animals on which man depended for food. During a lifetime glaciers forced man to seek protection from the long winters under cliffs and in the mouths of shallow caves; intensified the struggle for food during the short summers; induced the

production of more and better hunting weapons and techniques; and forced man to adopt the hides of animals as bodily protection against cold and rain.

### C. TOPOGRAPHY

1. LAND AND SEA RELATIONSHIPS in Europe underwent great changes before as well as during the time Paleolithic man inhabited Europe. The extent and contour of the land masses varied with the periods of glaciation. Of course, like the glaciers themselves, changing coast lines had an indirect and extremely gradual effect upon the economic life of early man. From the vantage point of history they are fundamental in explaining the migrations of plants and animals and the immigration into Europe of man himself.

The detailed movements of land masses do not concern us beyond their general effects upon the distribution of animal and human life in Paleolithic times. The elevation and depression of continental Europe occurred several times. In general, elevation of the continent occurred during the interglacial periods and depression during glacial advances. Western Europe extended further to the north than it does now and the British Isles were merely plateaus in the continental mass, which even included Iceland. The English Channel and Irish Sea were valleys drained by rivers which entered the ocean far to the south. The Rhine and Elbe flowed far north through the expansive valley now filled by the North Sea. The rivers of western France and Spain flowed many miles westward before they entered the sea, and the Mediterranean basin was divided by the land bridge from Italy to Carthage into two valleys each with its lake fed by glacial streams.

During most of Paleolithic times Europe was connected with Africa by land bridges of varying extent. However, on the east, Europe was isolated from Asia by a vast inland sea of which the Black, Caspian, and Aral are mere remnants. This vast sea with the Ural Mountains to its north acted as an effective barrier to Asiatic influences until late

Paleolithic times, when the opening of the Bosphorus drained much of its contents into the lakes of the Mediterranean basin to form the present Mediterranean Sea.

The student who is untutored in the methods of the geologist and geographer may well question the validity of such a picture. Yet its proof is, on the whole, fairly simple. Valleys are usually the result of the cutting action of

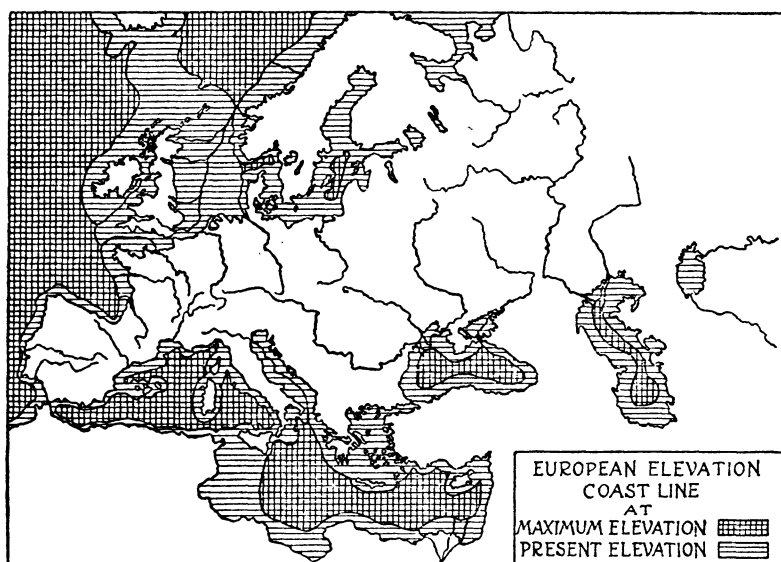


FIG. 2.—COASTLINE OF PREHISTORIC EUROPE

Land bridges between Europe and Africa and between England, Ireland, and the continent of Europe made vast areas accessible to animals from warmer climes. Paleolithic man hunted animals whose nearest surviving kin are found in central Africa.

running water. No cutting is possible under non-flowing water such as a sea. If soundings show the presence and course of river valleys below sea level then they must have been made when the area was above sea level. They are called "drowned valleys" and are found wherever land masses have been depressed.

2. LIMESTONE RIDGES were the second feature of topography which played an important role in the life of primitive man. Among them were distributed the caves and rock

shelters inhabited by Neanderthal man. Millions of years ago limestone was deposited in the sea by the activity of lime-bearing (shell) animals. As the crust of the earth was bent and twisted during the formation of continents crevices developed in these limestone strata and surface water was able to penetrate and erode caverns of considerable proportions. Sometimes the water from glaciers would enter the very top of hills composed of such rocks and erode huge and extensive caverns before it escaped from some lower stratum along a river valley. As erosion continued cliff shelters and shallow caverns were often formed by the cutting of the softer limestone strata from under the more resistant overlying rocks by the rivers as they cut their valleys. Without such limestone shelters it is doubtful if early man could have survived during the bitter winters of the Würm (fourth) glacial period.

The second service of limestone ridges to man was in supplying him with flint, one of the finest tool-making materials of early times. Flint is a form of silica with a high moisture content, the origin of which is not entirely understood. Although occasionally found elsewhere the greatest quantity of this material occurs in the form of nodules embedded in limestone and chalk strata.

3. LOESS SOIL is a sandy material composed of fine particles of rock and containing little humus or other plant food. It is a product of the combined forces of glaciation and wind distribution. As glaciers moved over the earth's surface rock particles became embedded in them. These gradually worked their way to the bottom of the ice mass, where they were broken and ground by the pressure and abrasive action of the glacier. During the brief but hot summer period surface snows melted and trickled down the crevasses in the glaciers to form a river beneath. The finer rock particles were carried along and further ground by the current. The amount and size of debris carried was proportional to the depth and speed of the current. When at last such glacier-fed rivers emerged from beneath the ice

and became wider and shallower they deposited the fine rock silt along their channels. Furthermore, when glaciers receded millions of tons of glacial debris accumulated in their wake. Finally, at the end of a glacial period when the climate was very dry, high winds distributed the finer elements of this glacial debris over wide areas and tended to create broad and relatively level plains. The dust storms which carried the loess soil over wide areas of Europe very likely resembled those destructive winds which laid waste large areas of our central plains in the spring of 1935 and forced the inhabitants of man's greatest artifacts (cities) to suspend their daily routine and seek protection from nature's latest assault.

Loess-soil deposits played a significant role in the life of Neanderthal man. Such deposits were hostile to tree life and were usually covered with grass. On such grassy areas grazed many of the animals upon which man depended for food.

#### D. FAUNA

The animal life of Paleolithic times is of the greatest importance to the economic life of primitive man. From it he obtained most of his food, all his clothes, and the materials for many of his more delicate implements. The type and form of hunting weapons were very largely determined by the kinds of animals which roamed the immediate vicinity of his camp site. We shall reserve a detailed discussion of the types of animals hunted by primitive man until we study the techniques employed in his basic economic activity.

#### III. SOCIAL ENVIRONMENT

Glaciation, topography, and such natural resources as minerals, timber, and wild animals constituted the physical framework and the materials within which and with which Paleolithic man had to work. They offered great obstacles to man as he struggled to fill his stomach

and to protect his body from wind and rain. Much more important to the evolution of that unique human achievement, culture, was the nature of man, the relationships which existed between himself and his fellow men, and the slowly accumulating knowledge, skills, implements, and structures which constitute the social heritage and artifacts of society. The development of man as an integral part of a group and as the factor which shapes, and in turn is shaped by, the group is the social process. The methods and means by which man modifies the materials of nature to satisfy his wants and to assure the increase of his species, and its material and non-material products, is the economic process. These two processes form the nucleus of that part of the social milieu called the social environment. The biological or racial aspects of early man constitute a convenient point from which to begin our study of the social environment of hunting culture.

### A. PRIMITIVE RACES

Students of economics need not be directly concerned with a study of races. However, we should at least recognize the chief representatives of man's earliest ancestors. The earliest known representative of the human race is *Pithecanthropus erectus*. He is often called *Java man* since the remains of his skeleton were found there in 1891. The remains indicate that he had attained an erect posture with free use of hands for grasping, and possessed the ability to profit from experience and thus accumulate tradition.

The earliest known human inhabitant of Europe was the *Piltdown man*, as he is often called after the place in England where his skull was discovered in 1911. A high forehead, distinctively human teeth, and thick cranium all place Piltdown man as definitely human.

Another very early European man was the owner of the lower jaw found near Heidelberg in 1907. It is generally believed that the *Heidelberg man* lived during the second interglacial (Mindel-Riss) period. At best he was a brutish

looking fellow with slouching gait and ape-like features more savage than Piltdown man but more human than Java man.

*Neanderthal (Mousterian) Man:* Not until the third interglacial (Riss-Würm) period does Europe seem to have been widely inhabited by man. Paleolithic deposits contain many human fossils. The first and best known of these was discovered in 1856 at Neanderthal near Düsseldorf, Germany. However, in the eighty years since this discovery more than twenty skeletons of Neanderthal men, women, and children have been brought to light. These make it possible to reconstruct a highly accurate picture of this creature.

He had a very large head deep-set upon broad and stooping shoulders. His short, heavy trunk was supported by very short and thick-set limbs, which could not be flexed straight, thus preventing him from standing fully erect. The short powerful arms terminated in enormous hands, which lacked the delicate relation of thumb and fingers essential to skillful manipulation. His gait was irregular and slouching and his stooping posture gave him the movements of the higher apes. It was more through bodily strength than mental cunning that this race was able to resist the rigors of glacial times and to spread its culture over western Europe.

*Cro-Magnon Man:* With the recession of the fourth and last major glacier Neanderthal man disappeared from Europe and an entirely new race invaded the continent. These new invaders, known as Cro-Magnons, were the first representatives of modern man (*Homo sapiens*). In stature they were fairly tall,  $5\frac{1}{2}$  to 6 feet, and well proportioned. They were probably handsome, even by modern standards, and compared to their predecessors they were a marked improvement. Their brain capacity greatly exceeded that of the average man today. Their foreheads, although narrow in relation to the face, were upright and well developed, revealing a high degree of intelligence. We



shall see when we study their industry, art, and magic that they excelled any preceding and many succeeding races in these highly specialized fields.

During the Mesolithic period there appeared in Europe at least one new race, a round-headed (brachycephalic), thick-set folk who came to constitute the *Alpine race*. The arrival of a second, long-headed (dolichocephalic) people who mixed with the older Cro-Magnon race produced the *Mediterranean race*. A third, long-headed race, which entered Europe along the shores of the Baltic, were supposed to be the first representatives of the *Teutonic or Nordic race*. Much more significant from the economic point of view was the intermingling of these purer types to form many intermediate varieties. This mingling of races was a prelude to what characterizes all the populations of Europe at the present time, namely, the presence of races widely separated in origin, but closely united by customs, institutions, and beliefs.

## B. SOCIAL ORGANIZATION

The social organization refers to the patterns or arrangements in which the members of a group align themselves in carrying on all phases of the social process, especially procreation, gaining the material basis of existence, and adjusting the desires of the individual to the will of the group. Since social organization is merely the way in which people cooperate in the accomplishment of certain desired ends, the type of organization depends primarily upon the number of persons concerned. The number of persons constituting a society, in turn, depends upon the power of the group to bear and to rear children and the efficiency of its collective effort in getting the essentials of life—shelter, clothing, and, more basically, food. During the Paleolithic period man's economic efforts were not very productive and the numbers which constituted self-sustaining groups were always small. The social organization

was relatively simple and centered around the two primary functions of procreation and food gathering.

The political organization of primitive man (if that term is applicable and if the practices of living primitives are at all indicative) centered around totemism and kinship rather than the family.

1. TOTEMISM is the sociological organization of a group based upon the belief that all individuals are related through common descent from some animal ancestor. It is an aspect of primitive mythology and reflects the close connection between the economic activity and the beliefs of hunting peoples. The abject dependence of man upon animals for his existence probably led to the belief that man descended from them. The totem is the animal from which all members of a group are believed to be descended, from which they take their name, and, often, from which they received certain mystical powers, especially in time of trouble.

All persons supposedly descended from the same totem ancestor are "of the same flesh" and constitute a *clan*. Since a clan is exogamous, which means that its members must marry someone in another rather than their own clan, it is obvious that a person's natural father and mother cannot be descended from the same totem. Such a condition results in lineage, or method of counting descent, being either matrilineal or patrilineal. One's kinsmen are one's father's or mother's people, but not both.

For instance, two clans may live along opposite banks of a river. One may be called the *bear* clan, the other the *fox*. Since these totemic groups are exogamous, marital alliances must cross the river. Being matrilineal, the bear wives and fox wives will remain on their respective sides. The husbands, whether they reside with the wives' people or only visit intermittently, are outsiders in the totemic as well as the literal meaning of the term. Children of such matrilineal families remain with the mother and her family. Discipline is administered not by the father but by the

mother or possibly her brother. When they reach maturity they are initiated into the clan through puberty rights administered by the Shaman. They become an integral part of the mother's clan and are only related to the father through the tribe. All their mother's blood relations are their totemic relatives. All boys and girls of their mother's clan are their brothers and sisters. Thus on the totemic level of social organization the natural family consisting of father, mother, and children is always present but is not the actual social and economic unit. Kinship is, therefore, sociological rather than biological.

The *tribe* is a group of clans. It is a social unit within which are clans having exogamous marital relationships. The tribe itself is endogamous since marriage outside it is disallowed by custom. The totemic groups or clans constitute the basic functioning units. The bears and foxes described above would belong to the same tribe. Such intermarrying groups band together and form an economic system in the sense that the entire tribe is economically self-sufficient.

When the tribe increases in numbers and spreads over a considerable territory the tie of kinship weakens and a new organizing principle appears in the form of territorial groups. The duties of kinship are transformed into the duties of neighborliness and the institutions of the village replace those of the hunting pack. But this brings us to the social organization of large groups having domesticated animals and practicing hoe culture. As we shall see, village culture is fundamentally different both in its economy and in its social organization.

2. HOME LIFE: *Fire* was perhaps the chief factor in determining the form and organization of prehistoric man's most intimate group relationships. Fire provided the nucleus of the socio-economic unit—the home. The earliest evidence of the use of fire is in Acheulean deposits. However, it was not until Mousterian times that hearths became common. It is very probable that man first became familiar

with the properties of fire through accidental conflagrations, such as forest fires, which had been ignited by lightning or volcanic activity. Undoubtedly man was able to control and use fire long before he was able to kindle it. Probably it was regarded as a gift of the spirits and was surrounded with mystical rites which placed the responsibility of maintaining the hearth fire upon special subordinates of the Shaman. The role of the vestal virgins in Roman religion probably represented the functionless survival of one of the most vital duties of early man.

The introduction of fire had far-reaching consequences in the development of culture. The revolting practice of drinking the warm blood and eating the still quivering flesh of newly slain prey probably gave way to the careful skinning of the kill and the carrying of the dismembered parts to the home hearth, where they were roasted by the women of the clan.

As the glacial conditions slowly advanced during Mousterian times and man was driven from his open camp sites to the rock shelters in the limestone ridges, fire doubtless became the focus of home life. Its services were numerous. Roasting, broiling, and possibly smoking became the accepted modes of preparing food, as shown by the charred bones around hearths. These methods of preparing food not only imparted superior flavor but actually increased the certainty of the food supply. Roasted and smoked meats, especially when kept in the low, even temperature of a cave, doubtless remained fit for human consumption much longer than fresh meat and assured a more regularized supply. As a protecting force fire had no equal. Aside from the warmth which it imparted directly to those squatting around the blazing pile or indirectly to those who slept in the still warm ashes, fire warded off sickness by raising the temperature and reducing the dampness of the cliff shelter or cave mouth, repelled dangerous beasts, and dispelled the gloom of the long, cold winters. Fire even aided men in gaining as well as holding possession of the

caves, for even the fierce cave bear shared the universal animal fear of fire. Indeed, fire has been called the chief force in domesticating man himself. No man can doubt that it was a major force in promoting the sociological aspects of man's life.

"Cave man" is the term often erroneously applied to Paleolithic man. It is often assumed that people of this age lived deep in the natural caves which dot the limestone ridges of Europe. Nothing is more inaccurate. Even in Mousterian times when glacial conditions spread over vast areas of Europe man did not live inside caves. The only evidence of man's activity inside caves is the art associated with magic. This was doubtless the work of the Shaman or his associates and was probably executed during the drier summer season when the interior dampness was at its minimum.

From the beginning of the Mousterian period until the final recession of glacial conditions in the Magdalenian period man did inhabit the sheltered recesses beneath overhanging cliffs and the mouths of shallow caves. Since fire burned more or less continually as a protection against dangerous animals it is evident that the smoke would have made permanent habitation in deep caves impossible. Fires were built at the margin of overhanging cliffs and just outside the entrance to caves; all evidences of human activity are found around hearths with the major remains on the sheltered side. Just beyond the vestibule in a few caves are found the workshops of the flint artisans. These were probably used during the long winter when deep snows and ice kept even the hunters "indoors." However, one must not suppose that certain shelters or grottoes were inhabited continuously by certain families or clans. The greater part of the life of Neanderthal man was undoubtedly passed in the open and in the hunt. Even the work of the women, which probably consisted of cooking and converting animal skins into serviceable covers and clothing, was done in the bright sun outside cave mouths or

beyond the rim of the overhanging cliffs. Only during extremely cold or very damp weather did the whole group seek protection behind the fire and in the vestibule of the cave. Here, in addition to a store of precious flint nodules for the skilled implement makers, were kept stores of firewood and meat for the days when bitter cold and blinding snowstorms forbade outdoor activity. During the short hot summers the Mousterian family probably moved to the open country nearer the runs of the food animals. No definite evidence of the type of shelter used in the open remains among the artifacts but if the tectiform drawings are diagrams of huts it is likely that some portable, skin-covered tent, not unlike the tepee of the American Indian, was used. The Cro-Magnons of the Solutrean and Magdalenian periods probably spent all except the most severe winters in open camps. The caves were still the center of magical rites. Several lamps used by the artists of the Magdalenian period have been found. It is quite likely that the Shaman class, which by this time probably consisted of a number of specialized workers, lived around the hearths at the mouths of their "temples."

3. SOCIAL CONTROLS are those aspects of a society which force, compel, or persuade individuals to conform to the pattern of behavior approved or sanctioned by the group. From a functional viewpoint they are the customs, institutions, attitudes, and behavior patterns of the group itself. *Pack life* constituted the primary pattern of behavior in terms of which the actions of the individual became meaningful and purposeful. In such a small group no elaborate system of social controls was necessary to make the individual conform to the established patterns of activity and thought. In primitive hunting packs the individual scarcely existed as a separate entity. He was always an integral part of the group, whose welfare was primary. As a child he was totally dependent for existence upon his kinsmen but as he grew to adulthood his status merely changed from helpless dependency to active par-

ticipation in the two most basic functioning units of the group—the hunting pack and the clan. Individuality was impossible in a society where the economic activity afforded nothing beyond the bare essentials of life. The individual was always sacrificed to the tribe. He was compelled to believe what others believed. He was taught to follow precedent and never to act spontaneously. The two primary controls, custom and attitudes, were both simple and direct. The third, the Shaman, was a more overt type.

a. CUSTOM is any widely accepted mode of behavior. It is embodied in the ordinary and habitual activities of a group. The individual comes to accept the customs of his group as he grows up and becomes a functioning part of society. Most persons conform to custom unconsciously in following established patterns of behavior. One becomes aware of custom as a social control only when he deviates from well-established ways. The sanctions of customs lie in the attitudes of the group rather than in laws or a police force. A social rule which is enforced by inflicting a specific punishment upon the offender constitutes a law. One who violates custom is not punished in a specific way or by an organized agency such as the police force. Rather he becomes conscious of his conduct by the feeling of "not belonging" which the attitudes of his friends induce. When everyone habitually complies with established ways of acting, formal rules or laws are not necessary. Custom is the term applied to such socially approved habitual behavior.

Many observers of living primitives are perplexed to find that they are so "law-abiding" in the absence of any police force. They are not law-abiding but merely custom-following persons who do not think of any other way of behaving. This is a result of their extreme economic poverty. The knowledge and technical skills of primitive man were inadequate to permit experimentation by deviation from the tried and proved ways. The individual was so completely a part of the hunting pack that its behavior

was his behavior; its beliefs, his beliefs; and its techniques, his techniques. Only in terms of accepted ways could he participate in the activities vital to his own existence.

Custom was the major social control. It supplied the disciplinary element necessary to every social organization. But it enslaved man to the traditional methods used by earlier generations. As time passed and the setting which gave rise to some practice changed, the empty and functionless form remained as a hindrance to an intelligent adjustment of man to his daily problems. Customs grow in number and complexity and become a dead weight upon the striving of the individual. Only when one remembers that the "inventions" in stoneworking techniques, to be described later, were made only after many thousands of years and frequently only upon the appearance of new races in a given region, can a member of the modern order appreciate the retarding influence of custom.

b. ATTITUDES: The basic agency of social control was the point of view or the attitudes which characterized the thinking of members of the hunting pack. An attitude is a judgment or opinion which manifests itself in social actions. It grows out of the social setting and constitutes a way of approaching the immediate problems of the individual. A person's attitudes are the most vital factors in conditioning his conduct. They collectively are the major element in that distinctly human quality called "character." The participation of the individual in the social process is conditioned by and in turn conditions his attitudes. Aside from habitual responses, one's behavior is largely a result of his attitudes. Knowledge, education, occupations, and social contacts of all types affect the individual only to the extent that they result in the formation or modification of attitudes.

The attitudes of Paleolithic man strongly reflected the life he lived. *Cruelty and destruction* were inevitable attitudes of members of a hunting pack. Physical violence was a normal phase of the hunt. The clawing away of the facial



features or disemboweling of one's kin by the attack of a wounded animal was perhaps not an uncommon sight. If several of the hunters stopped to render aid they might cause the loss of the prey so vital to the welfare of the group. The pack might even vent its fury upon the "humanitarians" who thus endangered the social welfare. Such conditions can easily be visualized by the soldier who is forced to "carry on" as his buddy falls wounded beside him. Little wonder that after a war crimes of passion and physical violence increase. Months of training in the arts of slaughter and destruction build attitudes which remain long after the soldier's uniform has been discarded for the suit of the law-abiding citizen. Likewise the Paleolithic hunter found that the discipline of the chase built attitudes of cruelty and destruction which influenced his whole round of life.

Closely associated with this attitude was that of *loyalty*. Strict obedience to the dictates of tradition and loyalty to the group as against the individual or other groups were vital to social welfare in times of crisis. Loyalty to the group under normal conditions assured its operation in critical moments. But, as in the world of today, custom probably hardened such an attitude into one of blind obedience which, in terms of consequences, sometimes injured rather than promoted the welfare of the group.

The lack of an economic surplus made the traditional method the only approved one for gaining the essentials of life. The attitudes of *intolerance and conservatism* opposed new ideas which might conflict with pack loyalty or endanger the group in its bitter struggle for existence. The conservatism of Paleolithic man is reflected in the evolution of his technical equipment. Throughout the half million years of the period the small number and regular succession of tool types testifies to the basic conservatism of man and the slow progress of invention. It was probably easier to obtain an edge on a stone tool by rubbing than by chipping. Sand and water for grinding abounded but the

attitude of conservatism caused the mind of man to move along one channel rather than another, and for immense lapses of time no one thought of grinding instead of chipping tools. Like the other attitudes of Paleolithic man, conservatism grew out of the primary need of group survival. As the individual grew from helpless childhood to adult participation he slowly acquired, from his elders and from his own experience, attitudes toward his world. These became his way of life and were perhaps the strongest agency of social control in Paleolithic culture.

c. SHAMAN CLASS: From a very early date the person who was believed to possess the power to communicate with the spirit world assumed an important place in the clan or tribe. The Shaman, as this person was called, became the director of magical rites. As we shall presently see, the close connection between prehistoric man's chief economic activities and the spirit world made an agency of control imperative to group welfare. The Shaman was consulted on all matters beyond the control of man's ordinary knowledge or techniques. By the time man developed tribal organization the duties of the Shaman had probably grown to such proportions as to require the full-time services of not only one but several Shamen. Because of the necessary abstinence from hunting and other economic activities the Shaman received his keep (food and clothing) in return for his specialized services. This distinct separation of the status and functions of a small group of specialists created a social class. To appreciate fully the social-control powers which the Shaman class exercised we must first examine the ideology of mythology and the technique of magic. We shall defer further consideration of this social control agency until we study magic.

4. MYTHOLOGY is one of the most elusive and yet one of the most realistic elements in the social milieu of prehistoric cultures. From a *taxonomic* viewpoint mythology is that body of stories which grew up as a result of man's attempt to interpret or explain the forces of nature. From

a *functional* viewpoint mythology is the non-material framework within which the entire hunting culture operated. If a modern analogy may be drawn at all, we may say that mythology did for prehistoric man what science does for modern man. Because of the vast scope of the subject and its vital relation to the economic life of all primitive peoples we shall approach the matter from both viewpoints.

a. BASIS: The nucleus of all myths is the *supernatural*. To us of the modern world a belief in the supernatural might easily be scorned as the product of a low mentality. Let us, therefore, examine more closely the origins of and basis for early man's belief in the supernatural. We shall then be able to see mythology as a highly rational explanation of those forces in his environment not amenable to his everyday knowledge and experience. As we have seen, the chief element in the social milieu of Paleolithic man was the physical environment. He well knew that there was no substitute for practical knowledge. For instance, experience taught him that a knowledge of the life habits of animals was essential to tracking them through the wilderness or forest; that a well-balanced and sharp-pointed weapon together with skill in driving it home to a mark were essential for success in the hunt. Yet the most intimate knowledge of wild life, the most finely designed weapons, and the greatest skill in the execution of proved techniques might not assure the individual or the group an adequate supply of meat.

The number of animals and their availability were conditioned by forces beyond man's power to control. Heat and floods might cause them to migrate away from their old haunts while drought or cold might draw them in greater numbers to the rivers and pools from which man himself derived the life-giving water. Against such forces man's knowledge and technical skill were futile. Why did they leave or become more abundant? With himself as the point of orientation it was quite natural for him to

impute to natural forces a rationality similar to his own. It was easy to believe that some rational force controlled the events of nature. Furthermore, the results of such forces were clearly apparent. Paleolithic man lived well or poorly depending upon how nature set the stage for the application of his knowledge and skills. The economic factors—abundance and scarcity—gave rise to his belief in a spirit world. The elders of the clan regarded or punished the children as their actions complied with or departed from approved practices. It was easy and reasonable for the elders to assume that the inhabitants of the all-powerful spirit world expressed their approval or disapproval of man's actions in the physical manifestations of nature. The major elements of the physical environment were thus thought to be controlled by spirits whose motives resembled those of man.

b. BELIEFS: The essential elements of the mythology and magic of living primitives involves three beliefs. *First*, there is the belief that there are everywhere invisible spirits possessing the powers of good and evil and eternally active in the affairs of man. *Secondly*, man himself comes from and ultimately returns to the spirit world. *Finally*, man must discover and comply with the wishes of the spirits, since success in life and the return to the happy hunting ground of the spirit world depends upon it. Could such beliefs be held by people endowed with the power of reasoning?

Let us consider some of the natural phenomena which did much to convince Paleolithic man of the reasonableness of his beliefs. *Images* gave strong support to his faith in the spirit world. Probably a hunter often knelt beside a clear, still pool of water to slack his thirst. As he looked into the mirror-like surface he saw himself. To him it appeared as an expression of his inner spirit. Spirits which thus reveal themselves to man apparently resent investigation for whenever the hunter put forth his hand to touch his spirit it disappeared in the ruffled waters of the pool. If the

hunter waited quietly it would manifest itself again. What mortal man could perform such feats?

Perhaps the *shadow* offered even more realistic evidence. Prehistoric man could run, jump, or crawl but his shadow followed his every antic. True, if he hid behind a rock his shadow disappeared. But the shadow of the rock merely covered his own. Just as a rock will hide one man from another so the spirit of a rock will hide that of a man. That shadows do not appear on cloudy days nor in semi-darkness did not arouse doubt but merely proved that a certain intensity of light was essential to man's perception of his inner spirit. We moderns explain the shadow in terms of modern science as a result of the imposition of an opaque object between the source of light and the surface upon which the rays would otherwise fall. The primitive explains it as an expression of the spirit which inhabits all material things both animate and inanimate. Both are explanations; both explain the phenomenon which is the common experience of all. Each is based upon certain assumptions or beliefs and both seem reasonable within the limits of those assumptions. For instance, how can one prove that his shadow is not there when he is in total darkness?

Even more convincing was the *echo*. A hunter fell behind the group and was startled by the sudden appearance of some animal. He screamed and someone screamed back at him. He called and the stranger mocked him. Finding his companions he related his experience and a searching party set out to capture the intruder. Guided by the calls of the finder they surrounded and closed in upon the fearless foe. Neither man nor animal could escape the narrowing circle of hunters but when finally they came face to face the foe still yelled defiance from afar. Repeated attempts produced the same results. Spirits can be heard but not seen. Again the facts have been explained in a reasonable and satisfying manner. The belief in spirits grew in the laboratory of experience where such phenomena as dew, fog, and the fury of storms offered additional evidence.

Natural phenomena were not the only basis for man's belief in the spirit world. Physiology, and even pathology, also offered what appeared to be convincing demonstrations of the close connection between the inner spirit of man and its numerous brothers in the supernatural realms. To primitives the *dream* offers almost irrefutable evidence of the world of spirits. The dreamer is "dead" to this world because his spirit has left its mortal shell to visit the land of its origin and the place to which it must ultimately return. To the individual the dream is a unique experience—sights, sounds, actions become distorted and the will of the dreamer seems subordinated to some supernatural power. Until the spirit returns to the body the dreamer cannot awake and become active in the world of men; when it does return the experience is but a memory to be retold and compared with those of others whom the spirits have favored. The dream is one of the chief elements in magical ritual and in puberty rites of current primitives. The Shaman or witch doctor differs from others of the group mainly in his power to commune with the spirit world at will. The ordinary mortal must await the pleasure of the spirits themselves.

Closely associated with the dream are *sleep* and *death*. Because of its unparalleled disruptive force no physiological phenomenon is a source of greater fear and interest than death. How can one explain it? How does it differ from sleep? Is dreamless sleep the result of a spirit having left the body only to be refused admittance to the spirit world? If it cannot find its way back will the spiritless body die?

Other phenomena, much less baffling than dreams, also offered apparent confirmation of the spirit world's existence. Think how well the mythological explanation fits such cases as involuntary twitching of the muscles, the sneeze, fainting, birthmarks, and mental diseases. Indeed, we can easily appreciate the vast array of facts in man's environment which conditioned his welfare if not his very existence and which required some explanation. A belief in the supernatural provided the necessary explanation and be-

came a major element in the social process of primitive cultures.

Even today many of our beliefs are not far removed from those of Paleolithic man, and we have our own peculiar superstitions. In the presence of science and a technology which turns many of the greatest powers of nature into the humblest and most obedient servants of man we find tall buildings with no thirteenth floor, persons who turn back if a black cat crosses their path, matter-of-fact businessmen refusing to close a deal on Friday, and even the most logical person looking for "lucky breaks."

c. FUNCTION: Myths are statements of historical events which explain or justify the social organization, economic practices, and moral values of primitive people. Some anthropologists believe the primary function of a myth is to explain why something exists or happens. This view is based upon the fact that, as stories, many myths are symbolic explanations of rather common but difficult to understand concepts such as creation, death, animal species, sexual functions, seasons, and classes. But for the cultural anthropologist the myths cannot be studied apart from the whole social order of which they are an integral part. From this viewpoint a myth is a statement of some extraordinary event which definitely established the social organization of a tribe, the form of some economic pursuit, or the basis of its magical beliefs and rites. Its function is to strengthen tradition, to justify the status quo, to establish the validity of magic, or to warrant the economic arrangement of labor and property by tracing it back to some supernatural beginning. It, therefore, forms the broad pattern of orientation in terms of which the economic, political, and magical activities of the social process become consistent and meaningful.

### C. ECONOMIC ACTIVITIES

1. BASIS: From an economic standpoint two of the most important aspects of Paleolithic life were the abilities and

techniques which man developed in his unceasing effort to modify his physical environment. As we here use the term, an *ability* is an inherited aptitude or faculty developed by long periods of biological evolution. It is a power of man which develops independently of the cultural pattern of any one generation. Of course, the cultural pattern does condition the individual and adapt his abilities to certain patterns of expression which are characteristic of his time, but nothing so acquired is biologically inherited by the next generation.

Over vast periods of time man evolved certain basic abilities which are the "original equipment" of the newborn individual although they may not be at his command immediately upon birth. This is apparent when the abilities of man are enumerated. By Mousterian (Middle Paleolithic) times man possessed the ability to grasp, to stand erect, to manipulate, to vocalize, and to profit from experience. The ability to grasp is a function of the physical placement of the thumb in relation to the fingers. The human foot does not possess it and no amount of training will equalize the ability of the hand and foot to grasp objects. Specific ways of grasping objects are, of course, learned by the individual from the going social pattern. One need only remember the effort required in learning to hold a fork or spoon in the approved way to appreciate that the mode of expressing an ability is definitely and slowly acquired. The same is true of all man's abilities. Finally, it is significant to note that man has not evolved a single new ability since prehistoric times.

The patterns into which man's inherent abilities are organized by training are in many cases learned so early in life and are so common that they are often mistaken for the inborn abilities themselves. A *technique* is a purposeful mode of behavior which is always acquired by an individual as the result of an intentional and conscious effort. A technique may be either a method of performing some act, a style of performance, or a way of accomplishing



some desired end. It may be either manual or mental but always consists of a basic pattern of manipulation. The inherited abilities of some individuals are greater than others and may enable them to develop certain techniques to a higher degree of perfection. The term *skill* is often used to denote the degree of mastery of a specific technique. Today techniques are most commonly expressed in combinations called occupations, trades, and professions. These are merely techniques so proportioned and related as to constitute a functioning whole.

Paleolithic techniques included throwing, prying, rolling, scouting, scraping, drilling, cutting, fishing, burning, sewing, lifting, and engraving. Each of these found expression in many specific modified forms. The simple technique of pounding is composed of the ability to grasp an object and the ability to coordinate the movement of the arm with the eye. It took many forms, such as smashing a bone with a piece of stone to obtain the marrow within, striking a nodule of flint with a fragment of rock to produce a sharp edge, or hacking the dead branches from trees to obtain firewood.

Many of primitive man's techniques will never be known, since it is only through his artifacts that we can definitely learn of them. Of course all prehistoric articles made from wood were long ago destroyed by the ravages of time. These non-durable artifacts may or may not have been important and numerous. Even when considering the durable artifacts there is considerable latitude for doubt, since the determination of function from form is a method beset by many pitfalls. Such a simple artifact as a stone with a sharpened edge presents a real problem. The technique used in its production is not easily determined. It may have been made by man's stone-working techniques, or again the edge may have been the result of nature's action. The discussion of primitive techniques and artifacts must, therefore, be approached with these limitations of methodology firmly in mind. Chief among Paleolithic

man's ability patterns were the techniques associated with the production of tools and weapons.

2. IMPLEMENTS are among the most enduring artifacts of Paleolithic culture. A vast amount has been written on the subject of their production and use. As students of economics we are interested in implements simply as one expression of man's early productive activity and his increasing power to gain a livelihood. We shall examine only the major phases of the subject.

a. LOWER PALEOLITHIC PERIOD: The earliest chipped-flint implements are called eoliths. Whether they were produced by man or by nature is not known. The significant thing about eoliths is that they are stones so shaped that they could be used by man as weapons or tools. Man probably first used naturally-shaped flints and later began to chip them either to augment the available supply or to improve the existing forms.

*Flint* was the most widely used implement material of the Paleolithic period. It is most commonly found in chalk and limestone, in the form of lumps resembling a potato in size and shape and called nodules. Flint is a homogeneous material which is especially easy to work into any desired shape by chipping. Its chief disadvantage lies in its brittleness, which tends to increase with age as its moisture content falls. As a tool it must be used with care and is a poor lever or pry at any time. Its brittleness, however, assures a keen and lasting edge or point which compares favorably with iron for cutting or punching leather or wood.

*Percussion chipping* or flaking is the earliest known technique of implement making. It consists of striking a piece of flint with a hard round pebble so as to knock off a chip or flake. After a flake is removed from a nodule the remaining piece is known as a nucleus or core. Implements fashioned from it are called core tools while those made from the flake are flake tools. The percussion technique is believed to have originated from the practice of attempting to improve stones already possessing a useful form. Eoliths

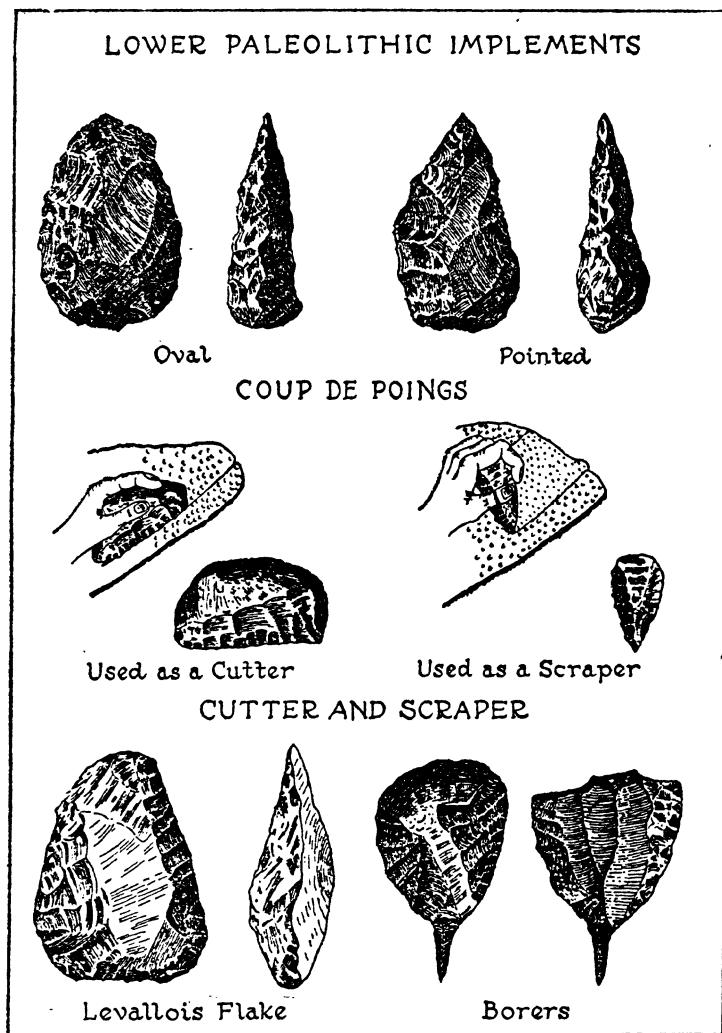


FIG. 3.—PALEOLITHIC IMPLEMENTS

The earliest implements were largely products of nature and had many uses. The coup de poing could be used for chopping, cutting, sawing, scraping, or reaming. As man acquired skill in flint chipping he shaped his implements to do fewer but better and more specialized jobs. The borer, for example, could punch holes in leather and in wood but had few other uses.

were usually flint and since these were found on the surface of the ground they were hard and brittle. Striking them with a pebble or some harder stone to remove objectionable ridges or points was doubtless a simple and quite satisfactory technique. The quickly attained and satisfactory results probably account for this method's becoming the dominant one for thousands of generations. During the early Lower Paleolithic period crude percussion flaking was the only technique used in the production of durable implements.

Since the technique of attaching stones to handles was unknown, the two primary purposes of flaking were to produce a fairly sharp working edge or point and to make blunt surfaces which were easier for the hand to hold. The earliest implement was both a tool and a weapon. This fist hatchet, or "coup de poing," was made from a large piece of flint and shaped so that a good hand hold could be secured at the base opposite the pointed or sharpened edge. It had numerous uses. Even the crudest form could be used, for chopping, scraping, skinning, splitting, and sawing. Man had not yet learned to adapt his tools to certain specialized functions.

Man's next advance in both technique and skill was *retouch flaking*, which consisted of removing small chips from the surface of an implement to give it symmetry of form and evenness of surface. Two methods were evolved. *Resolved* flaking consisted of striking the flint along an edge so that the blow was directed inward toward the body of the tool. Such blows produced a rippled surface. In *feather-edge* flaking, the blow was aimed toward the edge and away from the body of the tool. Such a method produced a smooth surface without pronounced ridges. Both methods were applied to core and flake tools. The characteristic tool produced by these methods was the Levallois flake, a large, wide, but very thin blade resembling a coup de poing which had been split along the sharp edge. It was always carefully retouched on the upper side while the

lower showed the ripple marks of the original flake. It was the broadest and thinnest blade ever produced by the percussion technique and was used as a weapon in the hunt and as a tool to skin and dismember the carcass of the prey.

The advance in skill is most clearly shown by the number of secondary or flake tools. These were made from the long slender flakes knocked from the flint nodules as core tools were fashioned and consequently they required very delicate handling. These included long blades, sharply pointed punches with well-rounded bases for grasping; fine planing tools used for cleaning and dressing hides; and many forms of scrapers.

This industrial evolution gives us our first opportunity to observe the manner of technical progress which characterizes all human activity. First there is a period of gradual development of some basic form until the limits of modification have been reached. Secondly, as the more nearly perfect form of an implement is developed, a sudden change or mutation into a new form appears. Later this in turn enters the improvement process. Doubtless it was the training of the rising generation in the ways of the old tradition that caused man to work out the existing forms almost to the limits of their possibilities before seeking new forms.

b. MIDDLE PALEOLITHIC (MOUSTERIAN) PERIOD: Neanderthal was hardier but apparently less ingenious and skillful than his predecessors. If any advance in implements can be noted it is in the modification of form for specific functions rather than in the production techniques themselves. Instead of versatile implements which served a variety of purposes, Neanderthal man shaped his implements for the more adequate performance of a single function. Possibly the increased need for warmer and better fitting clothing stimulated the production of more highly specialized tools used in the preparation of hides. But all implements exhibit a better adaptation of form to function. Almost all Mousterian implements were fashioned from large, deliberately struck flakes. The industrial implements included scrapers,

borers, knives, hammers, and large bone anvils. The most numerous and varied in form were the small scrapers made to be held between the thumb and forefinger.

Mousterian hunting weapons were few in number but quite efficient. Hand points (which served as daggers), knife blades, rounded throwing stones, and a degenerate coup de poing were the main stone weapons. It is probable that wood and the larger bones were used for spears and clubs. The greatest aid to the Neanderthal pack in securing food and protecting itself against the larger beasts and bitter elements, however, was *fire*. Numerous charred remains indicate that man could not only control but could actually make it. We have already discussed the significance of fire as the nucleus of home life.

C. THE UPPER PALEOLITHIC PERIOD began with no great innovations in flintworking; all the older Mousterian techniques were developed and refined. Perhaps the lack of more marked progress in flint can best be accounted for by the fact that man was developing new techniques in the making of bone implements, in the use of tools, and especially in art. The making of bone tools was a decided step forward, since this was an excellent medium in which to fashion the more delicate implements essential to many industrial and artistic practices.

*Grinding and polishing* were the new boneworking techniques. Grinding was used for shaping and consisted of rubbing the bone on a piece of rough sandstone. Polishing was used for finishing and was done with flint tools or by rubbing on fine-grained stones. For the first time bone of all types (antler, horn, and internal bones) served as the raw material for the implement makers' art. Neanderthal man had doubtless used whole bones and splinters for certain types of work but not until Aurignacian times did man deliberately and carefully fashion such implements. However, the new techniques which resulted in very delicate and finely finished bone tools were not applied to stone for thousands of years (until Neolithic times). The enforced

conservatism of a society struggling against the scarcity of economic goods probably kept man from departing from established ways when these proved reasonably satisfactory. Furthermore, the time required to grind a stone, even when the desired shape has been roughly approximated by flaking, is much greater than that required to grind bone to a useful size and shape. The constant need for augmenting the food supply by hunting probably kept Paleolithic man from using a tool-making technique which required great effort and much time. Since the earliest flint implements finished by the grinding process are all weapons, many authorities believe that the rise of a military class was the immediate cause for the application of this technique to stone. As we shall see, the members of a professional military class were freed from the mundane activities of food gathering and other basic economic pursuits and could therefore devote much time to the production of finely finished weapons.

The principal bone implements were: knives with even but easily dulled edges, delicate chisels for sculpturing soapstone figurines, sturdy awls, needles of numerous sizes, and slender beautifully engraved staffs (*bâtons de commandements*) of uncertain uses.

The important flint implements of the early Upper Paleolithic period consisted of the point, keeled scraper, curved blade, and graver. The point was merely a slender flint flake sharpened at one or both ends. The keeled scraper was a core tool chipped on both sides into a relatively broad, flat blade with a curved cutting edge. The large number of these and other types of scrapers indicates the continuing need for dressing skins not only for clothes but also for stretching over the crude framework of the huts in which Cro-Magnon man lived during the summers. The graver was used by artists to engrave animal forms on bone implements.

A short period (Solutrean) stands as a break in the development of Upper Paleolithic times. The older Aurignacian culture seems to have been drastically modified by the spread of migrating hordes over western Europe. Bone tools

diminished in number and quality but flintworking techniques reached their apex of perfection.

*Pressure flaking* was the new technique which enabled the Solutreans to produce wonderfully symmetrical and beautifully finished weapons. This technique consisted of pressing off flakes with a chisel-like tool while the flint rested firmly on a bone anvil. The older percussion method tended to set up a general shatter in the flint and often caused it to snap when very thin. Pressure flaking produced no shatter and made possible extremely thin blades of perfect symmetry. The one disadvantage was that the process could only be used on "fresh" or newly mined flints which had a high moisture content and were relatively soft. Of course, the discovery of flint nodules in chalk beds or along the outcrop of a limestone ridge probably was the immediate cause for the new technique. Not until man acquired a supply of "fresh" flint nodules could such a technique be used. When he did it probably became primary since striking such soft flints does not produce the same results as with old and hardened pieces.

The technique resulted in the production of three new weapons. The laurel-leaf lance head was broad, exceedingly thin, and chipped on both faces. The narrower willow-leaf spear head was made from a long flake and chipped on only one side. Smaller dart points, plain and barbed, complete the list of exquisitely finished and very effective hunting weapons. Their thinness and smoothness enabled them to penetrate deeply into the body of even large animals. The barbed types offered the additional advantage of remaining in the flesh to inflict further damage as the animal ran.

The larger implements of this period were made from flint by the older percussion technique. It is probable that this cruder but quicker method was used to block out rough shapes, which were then finished by the pressure type of retouch flaking.


The last part of the Upper Paleolithic period (Magdalenian) is considered by many authorities as a continua-



tion of the first. Techniques underwent great change and development. With the sudden disappearance of the Solutreans, flintworking declined even more rapidly than it had advanced. The only flint implements of Magdalenian times which show any careful workmanship are those used in the manufacture of bone tools and in engraving. This decline was accompanied by the rapid development in bone implements and by the elaboration of the artistic techniques of engraving, sculpturing, and painting. The invention of the highly efficient bone harpoon probably accounts for the relative decline of hunting and the rapid spread of fishing. The techniques of boneworking reached unprecedented height. Bone, antler, horn, and ivory were sawed, chiseled, scraped, split, drilled, and polished into hundreds of implements. No finer examples have ever been found.

Bone implements included a vast array of tools, weapons, and magical aids. The industrial tools included the spatula, chisel, knife, awl, needle, and pin. Chisels and knives of many widths and lengths were scraped and ground to size. In the awls, needles, and pins we find the most delicate products of the boneworker. Needles varied in length from four inches down to less than one inch and possessed round, oval, or rectangular cross sections. The pin was a new invention and together with the needle shows the advance in the technique of clothes making. The presence of numerous pierced periwinkle shells, doubtless strung as necklaces, reminds us that clothing included more than the merely protective elements.

In the making of bone weapons the craftsmanship and ingenuity of the Magdalenians found their finest expressions. The barbed harpoon was perhaps the most economically significant weapon and indicates the effect of a change in one part of a culture upon other and related parts. The *diminution of game and the increase in fish*, which resulted from changes in the physical environment during this period, probably encouraged experimentation in the production of an efficient harpoon.



Catching fish involved circumstances which made the retention of the fish after the first wound essential to success. In addition, the recovery of weapons which missed their mark in a deep and rapidly flowing river was no easy matter. These problems were largely solved by the barb and the attachment of the weapon to a line or to a shaft. The earliest types show crude projections along both sides. The next stage shows well-made and upward-curved barbs along only one side. Then follows the double-sided type with barbs either opposite or alternate. Finally, the double-rowed barbs change from slender curved hooks to stout angular projections. The method of attachment varied from a hole near the base to a projecting ring at the base. In cross section these harpoons were round, oval, or flat. The finest harpoons were made of reindeer antler.

The inventiveness of the Magdalenians was again expressed in the javelin throwers, a long bone shaft with a spike or hooked projection at the top end. They functioned as projections of the thrower's arm. The lance was laid on the thrower and its end engaged with the hook. A sweeping movement ending in a jerk gave the lance great force and more accurately controlled flight. Such devices are still used by contemporary primitives.

Another characteristic bone weapon was a lance point with a carefully cut notch at the base for attachment to a shaft and deeply engraved lines along its sides, for carrying poison or permitting the rapid escape of blood.

3. HUNTING was the basic economic activity of Paleolithic man. The *hunting pack* was an economic organization; its composition and form varied as the types of animals changed and as man's weapons and techniques developed. Only the most generalized picture can be painted from the meager evidence at hand.

During the Lower Paleolithic period weapons were too crude to be effective against large prey. Hunting probably consisted of trailing the larger and more aggressive animals until they made a kill. Then the pack either drove the victor

from its prize by the fury of its attack or waited jackal-like to eat what remained. The popular conception of our earliest ancestors as mighty hunters has no basis in fact. With only the coup de poing and a few other crude weapons, Piltdown and Heidelberg man relied more upon brute force of numbers than upon skillful techniques. Such large and dangerous animals as the lion, long-tusked elephant, broad-nosed rhinoceros, and hippopotamus probably hunted man as a prized morsel. The bison and wild ox were perhaps the only large prey of the earliest hunters.

Neanderthal man hunted in packs but with greatly improved weapons and much greater intelligence. There is, however, a striking disparity between the size and effectiveness of their weapons and the strength and resistance of the animals whose bones are found among the charred remains of the hearths. The *pitfall* and the *sling* must have been used by Mousterian hunters. Even large animals, such as the mammoth, could be killed with hand-held weapons after they had become weakened by starvation and frantic efforts to escape from a deep pit. No definite evidences of the pitfalls have been found but it is a very plausible explanation of the many large bones in the debris of this period. The theory of the sling is based upon the finding of numerous throwing stones. The embedding of such a stone in the thick skull of an animal gives strong support to such an explanation. But even with these and the other weapons described above man was probably still frequently forced to play the role of jackal. The commonest prey of this period were the reindeer, wild ox, bison, and wild horse, although remains of the woolly rhinoceros, giant stag, and cave bear are not unusual in the debris of the camp sites. The larger animals were probably highly prized for the marrow which their bones afforded.

By this time, the pack probably consisted of only certain members of the clan or tribe. The increase in the duties of the "home" kept many persons, especially the women, busy

with the chores of fire tending, cooking, clothes making, and child training. Judging from the prevalence of leg, thigh, and shoulder bones and the scarcity of ribs and vertebrae around Mousterian hearths the prey was dismembered where it fell and only the most easily carried portions taken back to the home hearth for cooking. The hunt was still the major economic activity of man but other types of food-gathering techniques were being developed.

In Upper Paleolithic times hunting reached its highest development and finally gave way to fishing as the leading food-gathering technique. The improved hunting methods were doubtless the result of the superior intelligence and better weapons of the invading Cro-Magnon men.

The shouldered points of late Aurignacian origin were probably attached to handles, thus increasing their range of effectiveness. Pitfalls and slings of earlier origin were apparently retained, for the bones of many huge animals are among the hearth debris.

During the Aurignacian period, especially in the Dordogne (France), hunters apparently concentrated their efforts upon the fleet animals of the steppe, as shown by the bones of more than 100,000 horses in the Aurignacian debris of the hearths near Le Solutre, France. How such numbers of this animal could have been slain is a mystery. Since the existence of the bow and arrow is doubtful, the use of the *bolas* has been suggested. This weapon is in use among primitives as well as advanced peoples today. In its simplest form it consists of two weights firmly attached to the opposite ends of a light rope. Numerous round stones with grooves cut around their equators for the apparent purpose of attaching them securely to leather thongs or other rope-like fibers have been found in Upper Paleolithic sites. These stones give strong support to the belief that the *bolas* was used. Holding one stone in his hand, the Paleolithic hunter whirled the other at the end of the connecting cord and then let the whole thing fly among the legs of a drove of horses.

By centrifugal force it wound around the legs of some fleeing horse or antelope and brought it to earth to be killed by the hunter.

In the short Solutrean period hunting techniques underwent slight if any improvement. The dry, cold climate favored the woolly mammoth and reindeer, which appear to be the chief objects of the hunters. The invention of pressure flaking enabled the flintworkers to produce more finely finished and efficient weapons but the actual hunting methods remained essentially the same.

The Magdalenian period represents the highest development of hunting in Paleolithic culture. The *bow and arrow* were the cause of a great change in hunting methods. Scholars are not certain just when the bow was invented, but it was probably in general use by this time. The bow represents the beginning of true mechanics rather than mere manipulation. It is essentially a device for building up and liberating energy under controlled conditions. The power of the arm muscle is stored into the bow as it is bent and is transmitted to the arrow with delicate control of aim as the string is released. The motion of bending the arm is changed into direct propulsion of the missile and the ability of primitive man to deliver fatal thrusts was extended over greatly increased distances.

With the introduction of the bow and arrow the hunt became more a matter of individual strategy and cunning and less a matter of the physical violence of numbers. The bow and arrow was indeed a simple and efficient engine of destruction, which, unfortunately, was only too soon turned from the social use of securing food to the anti-social function of destroying fellow humans. It is interesting to note at this point that throughout most if not all of the Paleolithic period man was a hunter but not a warrior. War, as we shall see, was the result of the rise of property, which did not exist until the late Neolithic period.

Several other inventions of this period contributed to the advance in hunting techniques. The throwing stick and

barbed point, both previously described, were the most important. The throwing stick was second only to the bow in extending the effective range for pointed shafts. Barbed points completed a powerfully and accurately propelled weapon. A number of such barbed weapons sticking in the body of a fleeing animal would inflict much damage and insure a quicker victory for the hunters. These new devices, together with the more advanced designs of older weapons, supplied the Magdalenian hunter with very effective equipment. But even with all these weapons and superior techniques, hunting began to decline as a food-gathering occupation. From the end of the Paleolithic period new and better means of securing food were evolved.

The rapid decline in the number of the animals, especially reindeer, and the increased supply of fish in the streams of Europe during the late Magdalenian period probably account for the development of fishing implements and techniques. The outstanding invention was the barbed bone *harpoon* although, at the time, the use of the barb in hunting weapons had progressed little beyond the shouldered-point stage. In hunting, the grip in the flesh of the prey which the barb afforded did hasten the death of the animal somewhat but served mainly to prevent the loss of weapons, especially arrows. In fishing the prey had the advantage of a protective medium. Water made the aim less certain and afforded numerous protected places into which the fisherman could not follow. These conditions made the recovery of both prey and weapons difficult. Unless the fish could be retained upon the death-dealing weapon, the fisherman received no reward for his effort and skill. That the importance of the problem of securing the prey and preventing the loss of misaimed weapons was quickly appreciated is shown by the rapid improvement in harpoon design, already discussed. The rows of barbs secured the fish and the hole at the base of the harpoon afforded a convenient means of tying the implement to a rope or cord, thus preventing its loss. Other fishing equipment consisted of bone hooks,

pierced pebbles which served as line sinkers, and nets. The rapid development of fishing equipment enabled man to exist along the streams and coasts when the climatic changes of Mesolithic times destroyed the more commonly hunted animals and covered central Europe with impenetrable forests. But the supremacy of fishing as the principal food-gathering technique was short-lived, since Neolithic man introduced domesticated animals and plants.

4. MAGIC is an element of culture vitally connected with the economic activities of man. The present knowledge about early magic is derived from the artifacts of primitive man and from the rites and practices of living primitives.

a. NATURE: Just as mythology was primitive man's attempt to explain and to justify the operation of his social milieu, especially those parts not subject to his rule-of-thumb knowledge, so magic was his attempt to control those forces in his environment essential to his welfare but not amenable to his technical abilities. In a limited sense science is our modern mythology and technology our modern magic. Science explains and often attempts to justify (by making immutable) the behavior (laws) of nature; technology attempts to harness nature for man's use.

Magic was not a substitute for human effort but a supplement to it. Over and above man's equipment and techniques magic assisted him to forestall misfortune or to ensnare luck. This is borne out by anthropological studies of current primitives. Magic never enters certain fields of human endeavor, such as the production of stone implements, making fire, cooking, and minor domestic activities. In all these vitally important activities ordinary knowledge and technical skill suffice to assure complete mastery of the functions by man. In hunting, fishing, navigation, and agriculture, however, magic appears as an adjunct to skill and effort. To understand the economic significance of magic it is necessary to study its origins, functions, and forms.

b. ORIGIN: Magic originated, like mythology, out of experience, which taught primitive man that within certain

limits knowledge is supreme but that beyond these limits intelligent exertion could accomplish nothing.

The social heritage enabled Magdalenian man to produce effective weapons and tools, to make and control fire, to prepare food and clothing, and to carry on the myriad tasks of a functioning society. Such knowledge and technical skills were developed and transmitted from generation to generation. Nevertheless man was surrounded by the great forces and vagaries of nature, which could make his efforts unusually productive or bring death and destruction to his very hearth. To acquire an adequate supply of meat, good weapons and expert use were essential; to protect his puny body against the elements skins must be scraped, cured, cut, and fitted; and to rear the young required practical education as well as the basic food, clothing, and protection. But of what avail was any or all of his knowledge and equipment against the migration of animals, great droughts or floods, deep long-lasting snows, forest fires, or sickness and death? His mythology told him such forces were manifestations of the supernatural and that they could only be controlled by the inhabitants of the spirit world. To ward off the evil spirits and their work and to enlist the aid of the powers which enhanced his welfare primitive man resorted to magic.

c. THE FUNCTIONS of magic were numerous and varied. Primarily it was the agency by which man attempted to gain the aid of supernatural powers in controlling such forces of nature and destiny as rain, wind, fertility, disease, and death. It helped him gain the aid of the spirit world to supplement his own efforts in such vital matters as war, love, agriculture, navigation, and trade, where his knowledge and technical skill were inadequate to assure the desired results.

For the individual, magic was an integrating force which gave him confidence in the execution of his most vital tasks and enabled him to maintain his poise and mental control under circumstances which otherwise would have emo-



tionally demoralized him with fear, hatred, despair, or unrequited love. With its aid the supernatural powers were enlisted and focused upon the accomplishment of some definite objective intimately associated with his daily life.

For the group, magic served as an organizing force. The status of classes; the organization of labor; the relationship of clans and tribes; the pattern of certain occupations; the structure of the totemic family; the powers of military and economic leaders; and the development and administration of law, tradition, and other social controls all found group acceptance mainly because of the magical rites and myths associated with them. Mythology was the chief force in maintaining the social organization of primitive peoples; magic was the chief device of the controlling class in directing the operation of the larger economic and social processes.

d. FORMS: Magic found expression in certain traditional forms and employed a unique methodology, consisting of the setting, the ritual, and an officiating person. The chief setting for the magical rites of Paleolithic man was the inky blackness of the innermost recesses of the limestone caves. Doubtless the awesome silence and enshrouding blackness supplied the proper atmosphere for the work of the Shaman. Surely the dripping stalactites and rheumatic dampness gave the spectators increased respect for the supernatural powers of the persons who could spend much of their time in such unhealthy and ghostly surroundings. The art works on the walls, roof, and even floors of the caves were clearly an inherent part of the setting and the ritual. Certain features of these artifacts throw considerable light on the magical rites.

The location and form of these pictures show their magical significance. In many of the caves certain small, not easily reached, wall surfaces were engraved with numerous animal outlines one superimposed upon the other while large smooth areas of the limestone wall conveniently located were left untouched. Again, in the Font de Gaume near Les Eyzies, France, the red painting of a rhinoceros

has been found in a passage so narrow that one must move sidewise and rub both walls to pass through it. The drawing is at a height which can only be reached by standing upon the shoulders of a companion. Such artifacts indicate the importance of the place for magical rites. Of course, engravings and paintings do appear at more accessible places in this and other caves but even in these we find evidence of magical significance.

In a cave on the lower slopes of the Pyrenees near St. Girons, France, is found one of the very few pictures of what was probably a much practiced form of mimetic symbolism. Here appears the partly engraved and partly painted picture of a man masked as a stag. The Shaman probably dressed in the skin of the animal which the tribe wished to capture and then conducted weird dances in the magical ceremonies by which he cast a spell or induced the aid of friendly spirits. Burkitt believes that the mimetic masked dance had a strong psychological effect upon the hunters, especially if they participated in it. Reasoning from similar activities of current primitives, he believes that greater success in the hunt actually resulted because of the increased confidence which such a magical ritual inspired.

Most magic was based upon the sympathetic principles that like attracts like, that the whole is affected by acts upon any part, and that occult influences can be spread by contagion. The magic artifacts took the form principally of mimetic symbolism. Man first expressed his desire by drawing pictures of what he wanted and by imitating the action he desired to accomplish. The drawings of animals which emblazon the walls of the caves are predominantly of those suitable for food, which man wished to secure or to make more prolific. The very rare representations of those not suitable for food were doubtless made with the object of ridding the region of these dangerous animals.

The sympathetic principle of primitive magic is further shown by several features of cave drawings. Figures of wounded animals, with arrows and darts indicated upon

them at vital spots, are common. Bison with arrows in their sides, one with a red wound near his heart, and an elephant with his heart outlined in red are but a few of the drawings by which Paleolithic man indicated to the spirit world what he desired to accomplish in the hunt.

But although animal symbolism was predominant in all magical art, it was by no means exclusive. Many other forms of artifacts were used. Closely connected with the actual animal picture was the use of symbolic coloring. Red seems to be connected with the idea of blood as the vitalizing fluid which kept man and beast alive. The presence of red coloring matter in burial pits from Aurignacian times onward doubtless had magical significance.

Another symbol of abundant life is found in the female figurines discovered in a cave near Mentone, France. The exaggerated proportions of those parts of the body affected by maternity indicated a magical device intended to increase human fertility in reproducing the race. Professor James sees in these grotesque statuettes the prototype of the Mother Goddess of fertility which became one of the chief elements in the religions of Temple Town peoples.

About the actual ritual in which these diverse magical artifacts are used little can be said. However, it is evident from a functional study of the magic of living primitives that the magical rite consists of the production of some specific force by a duly-qualified person, who then directs the power to the accomplishment of some desired end. The whole art of magic centers around the Shaman, who consequently exercises the highest powers of social control in a primitive society.

#### D. EMERGENT CLASS

The *Shamen* constituted the first distinct class. The great economic and political power exercised by them in primitive societies is easily understood when we remember that magic was concerned with the supernatural. Its power came neither from man nor nature but from some unseen sphere

where irresistible powers existed. Since its primary function was to control forces which conditioned man's welfare but which lay beyond his knowledge and technical ability, it is evident that the possessor of such powers was not entirely of this world. Upon the Shaman the great mass of mankind depended for protection and guidance. His actions were not those of an ordinary mortal and could not be judged by normal standards. He ruled by authority from a world which held all destiny in its grip. Perhaps the nearest approach to the status of the Shaman was that of the early modern kings, who ruled by divine right. To oppose the Shaman was to question the supernatural and perhaps bring ruin upon the whole group.

But the social control exercised by the Shaman class did not rest solely upon the prestige with which it was clothed by a carefully-taught magical mythology nor even upon the fear of consequences. Without doubt the Shamen were the most intelligent members of the group. Their awe-inspiring spells did more than frighten the spectators. Based in many instances upon careful observation and the result of wide experience, their magic brought results with astonishing frequency. But failure itself quite often increased their social standing. Failure they explained by counter-magic and thus enlisted increased loyalty from the masses, who considered it a tribal disgrace to have their Shaman overpowered by another.

To many persons the term Shaman is synonymous with faker and it is quite easy for them to suppose that the pre-historic Shaman was a dispenser of trickery and deception. Now it is true that he often did interpret matters to his subjects differently than he perceived them. The hunters might come to him and ask if the day was favorable to their purpose. Rain, the Shaman knew, kept the animals in their lairs and made hunting dangerous as well as difficult. He also knew from the lore of his profession as well as from his own observation that the leaves of trees turned upward in the wind only when rain was most imminent. He, of course,

did not know why the leaves behaved this way. Our modern scientific explanation of the upward spiral of cyclonic winds which accompany a low-pressure area was not necessary to his work. His rule-of-thumb knowledge of the correlation sufficed, but to the hunters about to set out upon the serious business of gaining a food supply he appeared as a direct representative of the supernatural when he told them that if the spirits did not favor the day they would send a sign which would appear as silvered leaves upon some specific tree.

Such methods were neither deceptive in motive nor entirely without scientific justification. A common practice of modern medical men is to add to otherwise clear medicine some sparkling color. Symbolic red is still preferred. The color adds nothing to the curative powers of the concoction but it does add greatly to its psychological effect. Perhaps everyone can remember some illness when he felt that the brightly colored fluid must help him because it looked so potent. Paleolithic medicine men, like modern scientists, used the powers of suggestion to help accomplish desired ends. Thus the Shaman class came to wield a power among men which constituted the rudiments of social organization. We shall see how this power gave rise in later societies to the development of some of the most basic social controls. In fact, traditionalized mythology and magic were in a sense, the embryos from which emerged some of the basic institutions of later times, especially those of government, property, and class. Certainly the background of modern economic institutions are first discernible in Paleolithic culture.

#### IV. SUMMARY

Hunting culture created the economic nucleus of social organization. Through the inconceivably long Paleolithic period man acquired the techniques and tools essential to winning his battle against the forces of nature. Fire laid the basis of an organized group life. In implement making and hunting man found the means of assuring a food supply.

But before the end of this first great epoch in human history man had acquired more than the bare physical basis of existence. He had evolved an explanation of the great forces of nature (mythology) and had developed a technique for partially controlling them (magic). With these material and psychological aids man was able to develop the rudiments of a social heritage upon which every generation since has built.

### STUDY QUESTIONS

1. Of what value is the study of prehistoric man to an understanding of the evolution of the modern economic order? In what sense is prehistoric culture a product of modern research?
2. What sources are now available for the study of prehistoric man? Which are the more reliable? Why? Name and locate three primitive peoples whose cultures have been intensively studied.
3. On what basis can the Paleolithic period be divided? Make a chart showing the physical and social conditions during each of the six major periods. How do these periods correlate with glacial epochs? With geologic divisions of time?
4. What were the major conditioning factors in the physical environment of Paleolithic man? Evaluate the effects of each in terms of its influence upon economic activity. Which was the most significant?
5. Why is the study of races of little value to the cultural economist?
6. What was the basis of primitive social organization? What other bases are there? Compare the totemic and biological family. List and discuss three ways in which each affects the economic organization of the group.
7. What are the nature and function of a social control? Explain the statement, "Man was a social being before he was an individual." When are laws likely to supplement or supersede custom? Are attitudes affected by environment? How? Give some modern vestiges of Paleolithic attitudes. Are there any special reasons for their more frequent occurrence in American than in European life?
8. Why is mythology called the earliest system of thought? How was the mythology of primitive man related to his economic knowledge and techniques? In what sense did mythology serve primitive man as science does modern man?
9. By what abilities could Paleolithic man be distinguished from his fellow animals? What is an ability and how does it differ from a technique? Compare the abilities of modern man with those of primitive man. The techniques. How can you explain the difference? Distinguish techniques, skills, and occupations.

10. Trace Paleolithic man's increased economic powers as shown by the evolution of tool-making techniques. Why did percussion chipping long precede pressure flaking? Grinding? Do the same factors explain the persistence of certain techniques today?
11. How did the changing physical environment affect Paleolithic man's tools and hunting techniques? Give specific examples. Make a list of the largest animals hunted by early man and find the habitat of their nearest modern descendant. What does this reveal?
12. Discuss the origins, methods, and functions of primitive magic. Why was magic an inevitable adjunct of economic activity? What is its modern equivalent? From what sources did the Shaman receive his powers? How can you explain the frequent success of his methods? What evidence concerning magic does cave art reveal? What is modern magic? In what sector of our culture is it found? Why?

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Ch. 1. Dawn of the Stone Age, pp. 25-53.

Ch. 2. Coming of the Ice, pp. 54-79.

Ch. 3. Cave Life, pp. 80-104.

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These chapters give an unusually able but also elementary picture of the physical environment, the economic activities, and the social organization of Paleolithic man in Europe. Especially valuable are a glossary of terms used in prehistoric archeology, a diagram of the ancestry of man, and numerous detailed drawings of artifacts of the period. Good



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Not strictly accurate; novelistic rather than scholarly; good general description of Paleolithic artifacts and social organization. Many drawings and maps.

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## *Chapter Three*

# Village Culture

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### I. PHYSICAL ENVIRONMENT

The Neolithic period was ushered in with catastrophic changes in the climate and topography of Europe. We have already seen the results produced by the glacial cycles of the Paleolithic period. Since all these changes, except the seasonal ones, were very gradual man was able to adapt himself to them through countless generations. Now Europe underwent a complete metamorphosis in a relatively short period of time. The duration of each of the major divisions from Paleolithic to the present grew steadily shorter. The names and approximate span of these are as follows:

Mesolithic.....	15,000 years
Neolithic.....	10,000 years
Temple Town.....	8,000 years
Feudalism.....	1,000 years
Commercialism.....	300 years
Industrialism.....	200 years

### A. CLIMATE AND TOPOGRAPHY

The disappearance of Paleolithic man and of the animals which constituted his chief source of food, as well as the migrations of the new races into Europe, were the direct results of vast climatic changes.

The first great change consisted of an increase in temperature and a decrease in humidity. The *Mesolithic* period

covers this early warm and dry condition, when the tundra animals migrated northward and the glaciers withdrew into the mountainous areas. Water levels in lakes fell, the current in streams diminished, and bogs dried up. This dry period marked the destruction of the widespread Magdalenian level of the upper Paleolithic period. The transitional Mesolithic cultures consisted either of hard-pressed survivors of the Paleolithic period or of small groups of the new races immigrating from Asia. They were scattered along the edges of lakes and rivers, from which they derived their chief supply of food.

Presently the humidity rose and the warm, damp climate swept over Europe. It produced conditions which lasted until the end of *Neolithic* times. Then renewed dryness and the dwindling of the forests probably caused migrations from the limestone-ridge areas into the great river valleys of eastern Europe, where Temple Town cultures developed.

In the meantime the topography of Europe assumed, in general, its modern form. A mountainous backbone consisting of more or less connected ranges known as the Cantabrian, Pyrenees, Alps, Carpathian, Transylvania, and Caucasus Mountains divided Europe into northern plains and southern peninsulas. The Neolithic climate covered a Europe not greatly different in topography from that of today.

Changes in climate and topography were not confined to Europe, however. Asia probably played a role in the prehistory of mankind beyond even the wildest dreams of modern research students. Today central Asia is a vast inland desert. What precipitation falls is either absorbed into the sands or evaporates into the air. But in Paleolithic times a vast inland ocean covered much of the present desert region. This ocean was doubtless fed by glacial streams and at one time attained a level some 600 feet above that of the existing Caspian Sea. Such a body of water was itself sufficient to assure a favorable climate. It acted as a control of temperature variation by radiating

warmth when the surrounding land masses were chilled in winter and absorbing much of the summer's intense heat. But even more important to man was the constant evaporation, which produced abundant rain and made fruitful the land along its shores. While glaciers covered much of the surface of Europe, Asia presented a situation much more favorable to human activity. However, the drier Mesolithic period destroyed the basis of abundant life. The inhabitants of Asia were threatened with extinction or migration; they chose the latter and moved westward.

But the arrival of Asiatic migrants in a Europe freed from glaciers by the drought and warmth of Mesolithic climate gave but short respite to their ills. The Neolithic period which began upon the arrival of the new races produced changes in the physical environment which man was poorly equipped to meet. The warm humid conditions produced widespread fever-breeding swamps. Although Neolithic man may have been more resistant to disease than modern man there is no evidence that he was any more able to cope with an epidemic of malaria than the modern peasant. The physical factors of climate and topography presented different but none the less powerful influences in the social milieu of Neolithic man.

## B. FLORA AND FAUNA

Of greater significance to the economic life of Neolithic man were the changes in the wild life. In the Paleolithic period the fauna was the vital economic factor in man's physical environment but now the flora became the primary limiting one. The Neolithic even more than the Mesolithic climate favored the growth of trees over central Europe. Softwood forests of birch and fir fringed the northern tundras. Over most of the central plains spread dense forests in which the oak and spruce predominated.

These great forests, which were practically free of underbrush because of their dense shade, were easily accessible

to the hunter or traveler, but they offered little or nothing to migrating groups in search of a village site. First, they offered little food for domesticated animals. Their dense shade made agriculture impossible. Man did not know the process of girdling the trees and his tools were inadequate to clear the forest over any considerable area. Furthermore, they presented a constant menace from forest fires started by lightning. Their gloomy dampness probably caused man to regard them as the home of unfriendly spirits. For all practical purposes they were impenetrable to the early Neolithic invaders of Europe.

The only breaks in this impenetrable forest occurred along limestone ridges and in the lower river valleys, where the loess soil attained considerable thickness. Not until the very end of Neolithic times did man develop tools which enabled him to clear the forest, and even then the reduced humidity did much to aid him by thinning the growth. To the south of the great mountain barriers the flora was more serviceable to man. There berries, fruits, and grains replaced the dense forests. But even with his vastly improved technical equipment and social organization Neolithic man was still a pawn of nature carrying on his struggle for subsistence in such places as the major forces of the physical environment permitted.

## II. ECONOMIC FACTORS

The economic activities of Neolithic man centered around five major additions to his productive powers. Two of these—animal husbandry and plant cultivation—grew directly out of the new physical environment; two—ceramics and weaving of textiles—represented mutations in his technology; the fifth—manufacture of implements—marked a decided advance in his technical equipment and made possible for the first time carpentry and mining. Let us examine these basic economic factors around which the social organization flowered into the new pattern of village life.

## A. DOMESTICATION OF ANIMALS

1. NATURE: The domestication of animals refers to the relationship which exists between man and certain members of the animal kingdom. It has often been erroneously used to denote the process by which man adapted certain wild animals to his use. Domestication is not synonymous with taming.

Domesticated animals have three distinguishing characteristics. In the first place, they are *associated with man in a dependent way*. They require protection from wild beasts and to some degree from the elements. They must be assured a food supply in the form either of ample pasture or of prepared fodder. Many milk-producing varieties require the daily attention of man. The conditions of the life process of domesticated animals are thus inextricably bound up with the life of man. Of course, such status is also true of tamed animals and is, therefore, not an exclusive feature of the domesticated forms. However, even here we may note important differences. Domesticated animals are born into or voluntarily seek the tutelage of man while tamed animals must be induced into it by the wiles of man. Moreover, domesticated ones are usually economically useful and harmless. Although tamed animals are entertaining and sometimes useful, they are often dangerous.

Another characteristic of domesticated animals is *continuous breeding in captivity*. This distinguishes them from all other species, wild or tamed. Subject only to the available food, the number and variety of domesticated animals can be indefinitely increased under conditions of controlled breeding. Both tamed and wild animals breed in captivity under certain unusual conditions, but seldom in sufficient quantities to maintain a given number. A small herd of cattle, pigs, or horses can be doubled or trebled in size in a very few years by even the crudest husbandman but a herd of tamed elephants will, even under the most skilled

attention, eventually diminish. For centuries man has tried to domesticate the elephant in India without success. Taming is easy and the elephant can be quickly trained to serve man in a hundred capacities but the number of these useful animals can be maintained or increased only by capturing, taming, and training additional wild ones.

The third characteristic of the domesticated animal is the *number and variability of biological traits* which it exhibits. When compared with closely related wild forms domesticated animals show definite biological modification in such physical features as the pigmentation of eyes and skin; the color, form, length, and texture of the hair; the size and relationship of parts of the face such as the nose, mouth, and eyes; and the size and proportions of parts of the body.

2. ORIGINS: Just how animals became domesticated is still a matter of conjecture, but theories which assume man's deliberate invention of the process are rapidly being discredited both by obvious facts and by additional evidence. The oldest theory maintains that man captured the young of wild species and by *taming* them produced domesticated forms. Two facts offer definite discrediting data. First only about 30 of the 500,000 species of higher animals have been domesticated. Second, practically all of them first appeared in the relatively short Neolithic period. If man domesticated animals why did he not continue to avail himself of the numerous gains accruing from the process? Another theory suggests that the totemic organization of tribes caused man to protect the *totemic animals* and thus domesticate them for mystical or religious purposes. This theory also has scant evidence to support it. If the animals pictured in the upper Paleolithic art works represented totems, none of them are among the existing domesticated types. Furthermore, the totems of living tribes bear no resemblance to any domesticated animal. The theory is not supported by any known fact.

Today, the majority of students of the subject are coming to believe that domestication occurred outside Europe, probably in Asia, and that it was definitely connected with the catastrophic climatic disturbances that turned Asia into its present desert condition and drove man into the more favorably affected Europe. The *oasis theory* is representative of the new approach. The increasing dryness drove man and animals into closer relationship around the few remaining oases. The intensified struggle for existence produced biological changes both in man and in the associated animals of a restricted district. Thus both modern races and domesticated animals evolved out of the struggle which an overpowering physical environment imposed upon them.

3. FORMS: Since Neolithic peoples used the flesh of both wild and domesticated animals as food the earliest domesticated forms are not easily determined. The practice, which began with the use of fire in Mousterian times, of dismembering prey where it fell and bringing home only the most useful parts, aids in the identification of domesticated animals in Neolithic sites. Entire skeletons of slaughtered domesticated animals remain, but only certain specific bones of those killed in the hunt are ever found. Apparently some domesticated forms appeared first in certain places and were carried by migrating groups into new habitats, where both man and nature combined to produce variants.

During Neolithic times in Europe the chief forms were the dog, sheep, cattle, pig, donkey, cat, and horse. The dog was first associated with man in the late Mesolithic period. However, in the Neolithic village at least three varieties are found. Two wolf-like types were probably excellent sheep-tending dogs while the one of jackal descent served some unknown function. Sheep were perhaps the most characteristic domesticated animals of Neolithic times. Three types are known. Domesticated cattle were imported from Asia and were much smaller than the wild types which continued



to exist in Europe until the late Middle Ages. Pigs also came from Asia and had long legs and small bodies in comparison with the wild types pictured in the late Paleolithic art works. The donkey and cat appeared first in Egypt in late Neolithic times and are of undetermined origin. The horse played but a small part in the life of Neolithic villagers. Until the rise of nomads its function as a means of transport was unknown. The four types hunted and eaten by Paleolithic man seem to have had few survivors in Neolithic times. The earliest domestic horses originated in Asia and bore only slight resemblance to the wild types. The number of domesticated species continued to grow throughout the Neolithic period until, by the beginning of Temple Town culture at the dawn of recorded history, the meager list of about thirty was complete.

4. SIGNIFICANCE: The effects of domesticated animals upon the economic and social organization of man were far-reaching. They assured a regular and varied food supply not only in the form of meat but in many by-products such as milk and eggs. Until the advent of the cotton gin, animal hides and fibers supplied man with his chief protective wearing apparel. Leather and wool were the raw materials not only of clothing but also of many domestic arts and crafts. Another extremely valuable service of domesticated animals was the transportation of man and his burdens. Until the beginning of the present century the ox, horse, donkey, and camel have been the chief sources of motive power on land. It is doubtful if agriculture would have superseded hoe culture without the ox or horse. The wheel itself perhaps owes much of its development to the energy which domesticated animals made available for man's use. The greatest service of domesticated animals was that which made possible rapid increases in population with a consequent speeding up of the two basic cultural processes— invention and diffusion. Just as trade followed the flag in the sixteenth century, Neolithic social organization followed the milk-producing cow and goat.

## B. CULTIVATION OF PLANTS

1. NATURE: Much that has been said about domestication of animals applies to plants. However, the differences between the domesticated and wild forms of a plant are less marked. Since the tutelage of man can be applied to almost all types of plants with noticeable effects, the process of domestication is difficult to trace. The plants first cultivated by primitive man appear, however, to be as much a function of climatic changes as of man's efforts. The exact place or time of origin is a matter of doubt but, as in the case of animals, Asia seems to be the most likely site. The domestication of plants centered around the process of cultivation and since we are not concerned so much with botanical origins as with economic effects we shall limit our attention to those plants which man cultivated.

2. FORMS: Our knowledge of cultivated grains and other crops is derived chiefly from the grains and seeds preserved in the mud beneath the ruins of lake dwellings, those found in burial sites, and finally pictures on certain rare art works. The principal Neolithic grains were barley, wheat, and millet. Oats and rye did not appear until late in the Neolithic period. All these were doubtless brought into Europe by the Neolithic invaders from Asia. Apples and pears were large enough to suggest some care in their cultivation. Hazelnuts, beechnuts, walnuts, and acorns were used as food or fodder by lake village inhabitants, and all types of berries and grapes were certainly harvested. Neolithic man probably used his domesticated animal as a means of converting otherwise inedible plants into wholesome human food in the form of meat. Even today some farmers relish acorns through the medium of pork.

3. SIGNIFICANCE: Domesticated animals and cultivation of plants are two of the cornerstones upon which civilization rests. Our present industrial civilization would be impossible without them. As a result of their first introduction

into the European cultural stream by Neolithic man many economic and social advancements were made. Population increased rapidly and the well-regulated community life of permanent villages appeared. The congregation of relatively large numbers into settlements laid the basis for the division of labor. Tool making, ceramics, and carpentry were probably the occupations of specialists in late Neolithic villages. The increase in material wealth promoted the earliest concepts of property rights, which were probably first associated with group rather than individual control. Not until the rise of the economic surplus in Temple Town culture did property rights approximate anything resembling their modern status. The herds of cattle and the stored grain did not represent a surplus but were merely the basis for a meager but steady flow of the primary requisites of life.

4. TECHNIQUES AND TOOLS: Just what implements were employed in the planting, cultivation, and harvesting of grain is a matter of dispute since few specimens of even the most commonly used forms have survived. We shall examine such tools as are known in connection with the techniques in which they were employed.

a. CULTIVATION: The *digging stick* was perhaps the oldest form of tool employed in the preparation of the soil and in cultivating the growing crop. Although such sticks have not survived from prehistoric times, their widespread use among living primitives suggests that they were employed. The digging end of such sticks varied from points to chisel blades and was usually hardened with fire. Sometimes a doughnut-shaped stone ring was affixed to the shaft near the top end by means of a wooden wedge. This afforded a convenient hand hold when the stick was used for digging. Such doughnut-shaped stones have been found in Upper Paleolithic as well as Neolithic sites. These sticks were probably used in preparing the soil for crops by prying the surface layer loose and then jabbing the clods until a thin layer of easily worked soil was produced.

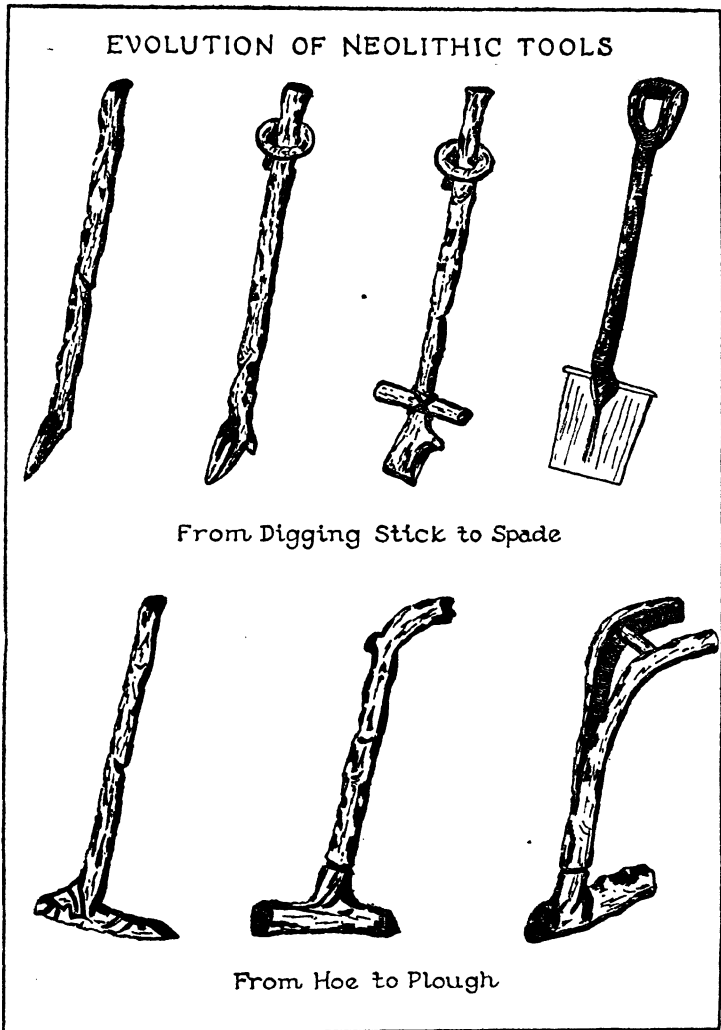


FIG. 4.—EVOLUTION OF IMPLEMENTS

Even the simplest tools were not created by some genius but were the product of gradual improvement by many individuals. The spade evolved from a crude pointed stick as man sought to do more with his limited energy. Although much more complex, modern machines are the result of man's ceaseless effort to modify and to control his physical environment.

The *spade* probably evolved from the digging stick. Its prototype was found among New Zealand primitives, where a cross stick was often lashed to a digging stick and used as a foot rest in spading the soil. Whether Neolithic man ever developed such an instrument or whether the digging stick was extensively used in soil preparation, is, of course, not definitely known. Some authorities believe that the grain which fell upon the ground during the cutting of the stalks acted as the basis of the next year's crop, thus making preparation of the soil and planting unnecessary.

Whether man prepared the soil and planted the seed or not, he did cultivate the growing crops. The *hoe* was the tool most commonly used in primitive cultivation. *Hoe culture* is the term properly applied to all prehistoric and much early historic grain growing. This distinguishes it from true agriculture, which arose with the invention of the inverting ploughshare and the definite preparation and planting of the field. In its simplest form a hoe is a stick with a forked and pointed end resembling a long-handled pick. A true hoe, however, has an adz-type blade affixed transversely to its end. Neolithic man used bone, antler, and stone for hoe blades. Many carefully chipped and polished but unhafted blades admirably suited for such use have been found among Neolithic remains. The "shoe-last" celt made of fine-grained igneous rock and beautifully polished probably served as a hoe blade. Some wide-bladed forms have a hole bored at a convenient angle for the hoe handle while the narrow, pointed types were probably attached by leather throngs to a forked stick. The hoe remained in use as the chief crop-cultivating implement in northern and western Europe until the Christian era.

The *plough* was probably first used to cultivate crops rather than to prepare the soil for planting. The first plough was doubtless an adaptation of the hoe. The earliest ploughs pictured in Egyptian tombs resembled a large hoe being dragged by a yoke of oxen hitched to a cross stick tied

to the haft just above its forked end. The early plough, whether it consisted of a large limb with a fire-hardened, forked end or had a stone or bone ploughshare, did little more than scratch the surface. It represented an advance over the hoe, not in the quality of the work, but in the greater ease and speed which animal power made possible. Not until medieval times when the mold board was developed was it possible really to plough by turning over (inverting) the topsoil. Of course, ploughs were used by Temple Town inhabitants to prepare the soil for planting, but even the numerous types used by the Greeks and Romans were all hoe-like in action.

b. HARVESTING was a technique which greatly antedated all others in the crop-production cycle. Certainly man harvested, that is, gathered or plucked, products of the plant world long before he attempted to augment nature's work by cultivating plants or sowing seeds. Paleolithic man probably harvested the nuts, berries, and the few other edible products of his botanical environment. To the extent that tools were employed the digging stick was perhaps first used to dig roots and tubers from the ground.

But without doubt the *sickle* headed the list of early tools used to harvest grain crops. The first form was a composite sickle consisting of many tiny, carefully sharpened pieces of flint (called microliths) set to form a saw-toothed row along the slender part of one side of a curved piece of bone or wood. Perhaps the jawbones of domesticated animals supplied the idea, for the jawbone of the donkey with serrated microliths replacing the teeth did serve as a sickle. The microliths of Mesolithic industries, which have puzzled many students, are doubtless the unhafted remains of composite cutting tools such as saws, knives, and sickles. The denticulated microliths were probably more often hafted in this fashion than used directly in woodworking or boneworking. Microliths from sickles used to cut grain can be distinguished from other

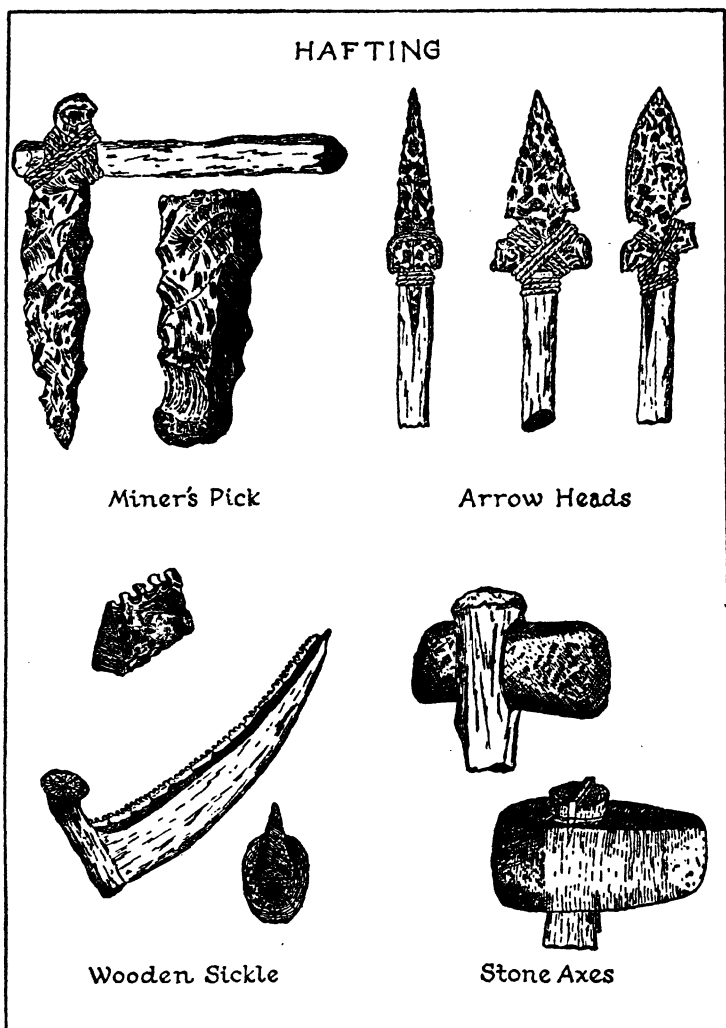


FIG. 5.—ADVANCED HAFTING METHODS

In his efforts to improve the effectiveness of his tools prehistoric man displayed great ingenuity. He used rope, thongs, and grooves to fasten flint heads securely to his tools and weapons. Wedging is still the most widely used method of hafting an ax. But in microlithed sickles Neolithic man foreshadowed the renewable blade of the modern safety razor. The flint edge could be sharpened and finally replaced in this early sickle.

similar microliths used for different purposes with almost as much accuracy as bullets shot from one gun may be distinguished from those shot from others. The abrasive action of the grain stalks produced a telltale burnish on the extreme edge of the flakes. Several splendid specimens of these wooden sickles with many of the saw-toothed microliths still held in the groove with bituminous cement have been found in Egypt. Only flint and obsidian chips were used for the microliths which formed the cutting edge of these composite tools.

c. **THRESHING** was an important Neolithic grain-harvesting technique about which little is definitely known. Rare pictures in Egyptian tombs show the stalks of grain spread on a platform and donkeys being driven back and forth to tread out the kernels. Beating with sticks was probably practiced in many villages. The rather efficient flail, consisting of two sticks fastened together with a rope, seems to have been a more modern invention. Winnowing, the separating of grain from the chaff, was probably accomplished by throwing the grain into the air, where a light breeze sufficed to carry away the chaff.

Grain from the threshing floor is neither a palatable nor an easily digested food. From earliest times man apparently crushed or ground grain before using it as food. At a very early date the *quern*, consisting of an upper and a lower flat stone, was used to grind the grain. Women, to whom this and most other laborious tasks were consigned, probably soon found that a rolling-pin type of top stone reduced the effort and improved the product. These and base slabs worn concave and hence called "saddle querns" have been found. Finally, the advantage of having one stone rotate upon another became evident, and simple hand-operated rotary querns were devised. In Temple Town cultures these attained large size and were operated by animal power. So far as known, however, Neolithic peoples never got beyond the crudest form of the rotating hand mill.



## C. MANUFACTURE OF IMPLEMENTS

1. TECHNIQUES used by Neolithic man in the making of stone implements did not represent any new inventions. Old techniques were merely applied to new materials with greater skill.

a. GRINDING AND POLISHING had long been used in the production of bone, ivory, and possibly wooden implements. The outstanding contribution of Neolithic man was the application of this technique to stone. So long as flaking was the only method used to shape and sharpen stone, the tool-making activities of man were limited to those very few minerals which lend themselves readily to such treatment. The extreme scarcity of obsidian (volcanic glass) left flint as the only widely used material. With the application of grinding, the tools and weapons of man became finer in finish and more durable in service. Grinding not only produced a finer and smoother cutting edge than even the most skilled Magdalenian craftsman could produce but enabled the edge to be applied to such igneous rocks as diorite and granite, which have the qualities of toughness as well as hardness.

The method employed was simple. After the implement had been reduced to the approximate size and shape by the older method of chipping, the edge to be sharpened or the surface to be polished was rubbed on a suitable slab of sandstone. These slabs were often scarce in regions where Neolithic villages flourished with the result that they were frequently imported. Sometimes less efficient blocks of granite, quartzite, and even flint were substituted. Such rubbing or smoothing stones are common.

Where Neolithic villages were close to old Paleolithic sites the older weapons were salvaged and reconditioned by the new technique. The ease with which the older Paleolithic flint tools could be reconditioned by grinding and sharpening makes it difficult to tell whether some forms were of Paleolithic or Neolithic origin. In general the new

technique was applied only to a few implements such as axes, adzes, celts, and knives. Grinding and polishing, however, were slow and arduous processes; the heavier and rougher tools of everyday life were still fashioned from flint cores by the quicker and easier process of flaking.

b. CHIPPING instead of falling into disuse was still the chief flintworking technique and was used more widely than ever during the age of polished stone. Percussion flaking was applied both to flint and to igneous rocks for preliminary shaping. For the harder materials pressure flaking was impossible and even percussion could be used only sparingly, since these rocks "split awkwardly and ill obeyed the will of the workman." Flaking was also used as the finishing technique on the faces and non-cutting surfaces of all but the most socially important and highly finished weapons and tools. The widespread continuance of this technique is shown not only by the large number of chipped implements but by the development of mining techniques for augmenting the available supply of flint.

c. HAFTING, or attaching handles to implements, became an increasingly important technique. The form most frequently used in hafting arrowheads and other small flint points consisted of cutting grooves into the tang and then binding the head to the shaft with stout thongs or flaxen cords. Large flint hammers and celts were often bored and driven onto the tapered end of stout handles. However, polished hammers, axes, and adzes were difficult to bore because of their greater hardness, while small points of flint, bone, and horn were a problem from every angle. To overcome these difficulties man devised several curious methods. The larger hammers and axes were tapered from the striking or cutting edge. Stout wooden limbs with knot holes or swellings were cut so that the thicker section came at one end. The knot hole was reamed or a rectangular hole was cut in the thick end and the polished stone head wedged firmly therein. The smaller points were first driven into the open end of a tapering horn or into a short section

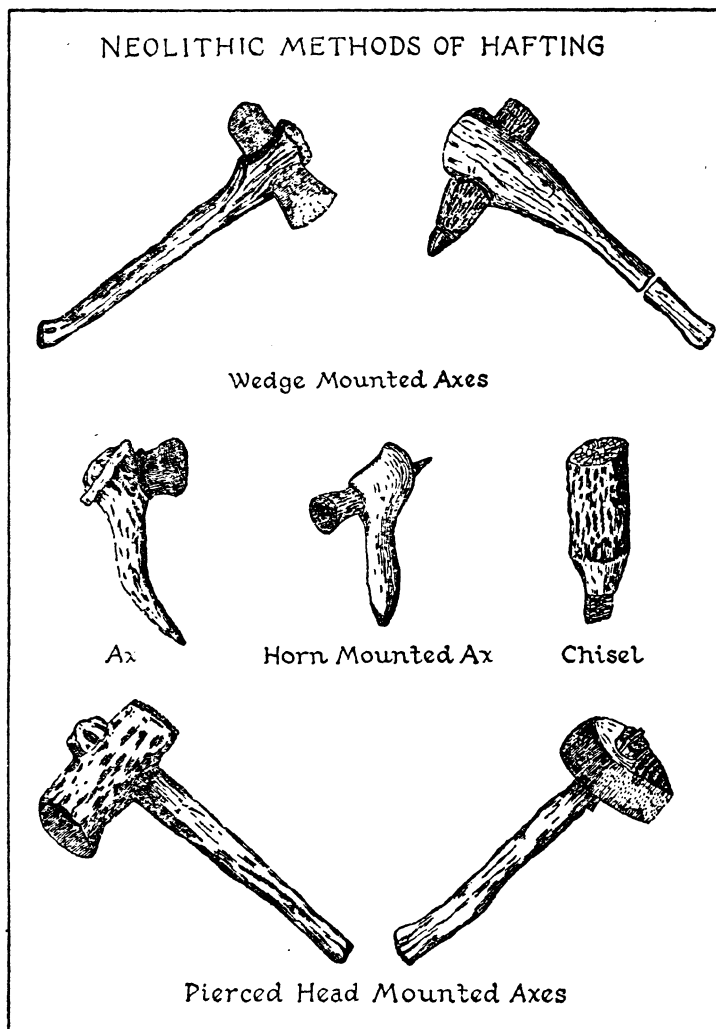


FIG. 6.—EARLY EXAMPLES OF HAFTING

Hafting, or attaching handles to stone implements, greatly increased the effectiveness of man's tools. A handle increased the leverage of a man's arm and resulted in a harder blow with a hammer or ax. Furthermore, a handle increased the effectiveness and precision of the tool and, at the same time, reduced the effort and fatigue of the user. A hafted chisel protected the hand of the holder and permitted a better control of its cutting edge.

of non-splitting wood having a considerably larger diameter. These horn and wood mounts served directly as convenient handles for small points and even blades or they were inserted into the large end of longer handles in the same manner used for stone axes.

An interesting characteristic of drilled stone axes and hammers is the hourglass-shaped hole. These holes for hafting were invariably splayed both above and below so that the diameter at the center was less than at either end. This is believed to have been the result of man's poor boring techniques and equipment, for not until the early Metal Age do holes of uniform diameter appear in stone implements. The exact boring technique is not known but a combination of chipping and grinding was probably used. Some of the blunt granite points driven into the ends of short, straight wooden handles probably served as drills. These may have been rotated between the palms of the hands while sand and water increased the abrasive action, as shown in Egyptian bas-reliefs.

*d.* MINING may not have been an entirely new technique but deep shaft workings first appeared in Neolithic times. Flint nodules are formed by the deposition of silica in the cavities left in soft limestone (chalk) strata by decaying organisms. Where such strata are exposed to the elements the soft material is eroded away and the flint nodules are left on the surface. These constituted the chief supply for Paleolithic workers. The finest flints in the world are found in the white chalk beds underlying southern England, northern France, southeastern Belgium, and Holland. One of the earliest Neolithic flint mines was in a vast chalk deposit near Maestricht, Holland. Here vertical shafts twenty to thirty feet deep communicated with horizontal passageways radiating into the rich flint-bearing stratum. When flint nodules were brought to the surface they were immediately worked into the rough shapes of desired implements. There were two reasons for this haste. First, freshly mined nodules have a high moisture content which makes

them soft and especially easy to flake. The drying process improved their hardness but increased the difficulty in shaping. Secondly, rough shaping reduced the amount of useless weight and greatly lessened the problem of transporting them. Flints from this mine were distributed widely over what were perhaps the first trade routes of Europe.

When an area served by a shaft was exhausted the useless chips were thrown back into the shaft. A number of such shafts, almost completely filled with flint fragments and debris, have been found. At Spiennes (near Mons, Belgium) the Neolithic miners sunk shafts three feet in diameter into the chalk some thirty or forty feet below the surface. At this depth galleries two to six feet high and three to four feet wide radiated out in all directions. The roof was supported by leaving blocks of chalk at frequent intervals exactly as was done in many of the early bituminous coal mines in western Pennsylvania. In these galleries have been found picks of deer horn and flint, polished hammers and ax heads, and wood ashes. Around the mouths of the vertical shafts the ground is littered with flakes chipped from the newly mined nodules. The crushed bodies of a man and boy, probably a miner and his son who were caught when a section of the roof collapsed, were recovered and now occupy a place of honor in the National Museum at Brussels. In late Neolithic times the honey-colored flints mined at Grand Pressigny (France) formed an important article of a rapidly growing commerce.

2. **TOOLS:** Neolithic tools show the increased power of man over nature. We have already noted those most commonly used in hoe culture and in mining. In general all Neolithic tools exhibit finer finish, greater efficiency, and specialization of form for a limited range of functions. A mere listing of those tools not already described will serve to indicate the range of the villager's industrial equipment.

*Hammers* varied from large chipped balls, grooved for hafting, to beautifully balanced mallet types. Their

striking faces were flat, concave, or convex and varied in size from small circles to large rectangular and oval areas. The uses of these hammers are not easily determined since most types were made from igneous rock which did not dent or chip. *Scrapers* of many shapes and sizes indicate that hides were still an important clothing material. Numerous varieties of *picks*, made from stag antlers, bone, and flint, constituted important items in mining and cultivating. *Chisels* resembled modern woodcutting types and were usually made from igneous rocks fully ground and polished. *Knives* were scarce. The practice of setting a row of serrated microliths in wood or bone to produce a composite blade probably accounts for the scarcity of single-piece knife blades. Infinite varieties of flint and bone *awls*, *needles*, and *pins* testify to the importance of dress in village life. *Whorls*, doughnut-shaped rings of stone or pottery, served as sinkers for fishing nets, pulls for the warp in weaving, hand holds on digging sticks, and as bolas balls. The *celt* was the most common igneous implement. Its shape varied greatly. In general it was a thin, chisel-like tool about six inches long and two inches wide. Its straight sides converged from a convex cutting edge to a narrow butt. It is believed to have been used as pick, chisel, and wedge. The practice of inserting this tool in bone or horn sheaths gave rise to the later more specialized forms, the ax and adz. From an economic standpoint the polished stone *axes* and *adzes* were the most important tools of Neolithic times. They made carpentry possible. The ax differed from the adz in that its cutting edge was parallel to the handle instead of at right angles. The end opposite the cutting edge was often square or round and served as a hammer.

The Neolithic techniques concerned with tool production did not represent any great improvement over those employed in Paleolithic times. Grinding stone was not a new technique but merely the application of an old one to a new substance. Likewise mining was not entirely new but the

deep shaft mines required the elaboration of the technique under new and difficult circumstances. However, the tools which these techniques made possible produced important results. With a new array of woodworking tools, made from igneous rocks and securely attached to well-shaped handles, man could for the first time cut large trees and erect the complex and permanent structures of a village. As we shall see, the houses were not only large and well designed but represented the solution of some fundamental problems in architecture and engineering. Even with these more efficient tools man could neither fell nor shape the hardwood trees. But with ample fir and other easily worked woods at his command man developed carpentry to an advanced stage. The tools concerned with home chores and clothing production show a marked improvement over Paleolithic types. Skins still constituted an important item of apparel but textile techniques and wool laid the basis for new fabrics and a wider range of clothing materials. Pottery, too, brought the diet and food preparation activities of Neolithic man to a new level.

3. **WEAPONS:** Neolithic weapons were, as a rule, more finely fashioned than tools. This was a result of the special position which their users came to occupy in the life of village peoples. The fossils in Neolithic hearths clearly indicate that man still obtained a part of his food supply by hunting and fishing. But he also turned his weapons against his fellow man in defending the group's property or in augmenting its wealth by pillage. In late Neolithic times the rare, imported materials and the exquisite form and finish of such weapons as the battle-ax indicate that the warrior was probably exempt from the mundane tasks of daily life.

The *battle-ax* is believed to have been introduced into Europe by the earlier Neolithic invaders who came soon after climatic changes caused the recession of northern glaciers and the drainage of the great central Asiatic Sea. The axes which they introduced were fully polished, always bored for hafting, and made from diorite, serpentine, or

granite. When attached to stout handles and used by strong men, they must have produced terror among the peaceful villagers and may have resulted in quick surrender to tribute-imposing invaders.

*Arrowheads* served both in battle and in the chase and were made in numerous sizes and shapes. Since they were made almost exclusively from flint, flaking was the usual technique. Of the conventional pointed types the most characteristic feature was the barb, which varied in design from short blunt shoulders to long wings extending far back along and parallel to the shaft. Methods of hafting arrowheads varied greatly but lashing seems to have predominated. Ease of mounting and salvaging heads from broken shafts were the chief advantages of this method.

Closely related and similar in design were javelin points or *spearheads*. These were chiefly of the laurel-leaf types first produced in Solutrian times. These long, slender blades were often extremely thin. They were made from flint by the pressure flaking method. Some of the longer blades were made thicker and rounder at the base and are believed to have been *daggers*. Metal was introduced in the south of Europe many centuries before it reached the north. These flint daggers were so perfectly made that they are believed to have been copied from southern bronze types and imported into the northern villages where they are most commonly found. On the other hand, it is quite possible that they were introduced along with the battle-ax by the warrior tribes.

In addition to these highly varied but efficient forms of stone weapons Neolithic man used many bone and wooden types. A stout wooden club with enlarged end is a very dangerous weapon in the hands of a powerful man. These and other wooden weapons were probably used from Chellean times to the Bronze Age.

The consistently finer finish and form of Neolithic weapons as contrasted with tools indicates the effects of the rise of a new group or class in society. In late Paleolithic



times the artifacts connected with art and magic exhibited a similar delicacy of form and careful finish. Many scholars believe that the Shamen had emerged as a class by Magdalenian times and that its members were freed from the mundane activities of food and clothing production. This enabled them to devote much time and energy to the drawing of symbolic pictures and to the perfecting of specialized activities connected with their art and magic.

In Neolithic society the weapons suggest the rise of a second group of specialists. To protect the village from attack by wandering nomads or other migratory groups, the warrior was relieved of all participation in the normal economic activity of the day. Much like a modern fireman he was free to spend most of his time in any way not interfering with his primary function. The beautifully finished battle-axes and other weapons shaped from the hardest rocks by the extremely slow grinding method offer good evidence of a distinct warrior class. Later we shall see the consequences of society maintaining two such powerful groups as the Shamen and warriors.

#### D. POTTERY

1. ORIGINS: Whether pottery was a result of village life or merely a coincidence is uncertain. The elements for pottery making (fire, clay, and sand) were certainly present and probably used by Paleolithic man. However, pottery probably existed before man learned to use it. Pieces of burned clay in which matted or woven fibers are clearly visible support the theory that the earliest pottery was evolved from basketry. Pre-Neolithic peoples undoubtedly lined their baskets with clay to give them increased rigidity as well as to close the openings between the woven reeds or other fibers. Such baskets are used by living primitives even to carry water. Perhaps worn-out baskets were thrown upon the fire where the clay lining hardened. However, these broken fragments of fired clay, found in late Paleolithic and Mesolithic sites, do not prove that

these early folk made and used pottery. Probably man unintentionally produced bits of pottery at many times and places before he recognized the value of the firing technique and applied it deliberately to the production of durable utensils and ornaments. True pottery involves more than mud-veneered and sun-dried baskets or fragments of fire-baked clay.

2. COMPOSITION: Pottery consisted of objects shaped from moist clay and exposed to the action of fire for sufficient time to produce a rigid and durable though somewhat fragile structure. Clays suitable for pottery are widely distributed but they vary considerably in quality. Even the best clays are not very satisfactory when used alone; some contract and crack when fired. Other very oily clays fail to preserve the shape of the object. Neolithic man learned quickly that mixing something in the paste to render it porous permitted the escape of internal moisture and produced a smooth hard surface on the utensil. Sand was used at first but it was soon discovered that wood or bone ashes also assured the escape of steam and in addition produced a surface which could be easily burnished.

Another problem encountered by early pottery makers was solved in an equally ingenious way. To produce smooth surfaces and uniform wall thickness, the clay paste must be absolutely homogeneous and free from all lumps. Uniformly pure clays were scarce. To conserve such pastes Neolithic man devised a veneered type of pottery. First the desired utensil was shaped from coarse, easily obtained clays and sun-dried until firm. This form was then dipped into a bath of the finer paste, which had been reduced to molasses consistency. Finally the veneered article was fired. Such pots possessed all the beauty and durability of solid types and helped to solve the economic problems associated with the scarcity of material and the technical difficulties of production.

Neolithic pottery was shaped without the aid of the potter's wheel. In the absence of this simple machine, which

was not invented until historic times, pottery can be shaped by modeling or by coiling. Only the first was employed by Neolithic workmen. It consisted of a kneading and pressing process. After a suitable-sized piece of clay was rolled into a round lump, the inside was hollowed out by enlarging a depression made with the fingers in the center of the top. As the hole was enlarged the utensil expanded until the desired size and thickness of side walls were attained. The process of building up the walls, by coiling a long rope-like piece of clay, used by many living primitives, was apparently unknown to Neolithic man in Europe.

3. SHAPES AND DECORATIONS: The shapes and surface designs of Neolithic pottery vary greatly with the area or time of production. The various types of pottery are a valuable aid in identifying associated artifacts. From an economic standpoint only the most general aspects of this phase of ceramics are significant. Until very late in the Neolithic period the shapes of utensils were determined by the functions they were to perform and by the limitations imposed by the available methods of production. The early forms were wide-mouthed, had round rather than flat bottoms, and were of varying diameters and depths. Their round shape aided the practice of burnishing, which consisted of rubbing the outer surface of the utensil with sand or with the concave surface of a specially made polishing stone. Furthermore, a slight twist of a round-bottomed basin or dish made a depression in the soft clay or sandy floor of the early huts and permitted the utensil to stand upright.

Gradually the variety of shapes increased and refinements were made. Feet were added to assist in maintaining an upright position when wooden floors were used, as in the case of the lake dwellers. Handles further widened the use of many shapes. On shallow frying-pan types, handles aided the cook; on jugs, mugs, and cups they made for convenience in use; while around the largest diameter of small-mouthed urns they served as places for attaching

cords by which to suspend them from the ridgepole or beams as a safeguard against rodents. Flared or grooved necks aided in the attachment of suspending cords or, in the case of smaller "cups," offered a convenient hold for the hand. As economic security increased and certain persons were freed from the relentless struggle for sustenance, pottery shapes were increasingly influenced by non-utilitarian factors. Shape became a medium of art expression. Many early features were retained as decorations although they were no longer useful. Feet on flat-bottomed urns provide an excellent example.

Decoration had little or no economic significance. Although many of the techniques used in the decoration of pottery were similar to those employed by the Magdalenian artists who produced the realistic pictures on cave walls, the motifs stand in sharp contrast. The cause is not difficult to determine. Paleolithic cave art served the purposes of sympathetic magic and found its motif in the animals which magic sought to make plentiful or to banish from the region. Such art was functional, and decorative. Artists were not dispensers of the aesthetic but the servants of the Shaman, whose function it was to control those forces vital to man but beyond his knowledge and technical equipment. In the relative security of the village with its herds and crops man was yet a victim of the elements. Weather still was his master and magic became more rather than less important. Its focus shifted: the forest rather than the cave became the center of its rites; the fertility of man, herds, and crops its object. Art became a purely decorative matter. Pottery constituted a new medium of artistic expression since it offered a surface where art for art's sake could find expression.

4. EFFECTS: Pottery did much to promote as well as to retard man's welfare. Its major effect was to revolutionize diet. Heretofore cooking had been limited almost wholly to broiling or roasting. It is not correct to say that boiling was impossible without pottery but it is certainly true that

pottery made boiling a common cooking technique. Pottery enabled man to utilize his new additions to diet in the form of grains, fruits, vegetables, and milk as well as the older forms of animal flesh, nuts, and root crops in new and more appetizing combinations. Soups, gruels, and stews became regularly possible. Even frying may have been practiced.

But pottery served man in other ways than cooking. Heretofore, animal skins, skulls, and mud-veneered baskets were the limit of man's liquid-holding equipment. These did not serve well as storage tanks. Pots, however, could hold liquids for long periods with little effect on taste and small danger of seepage. Milk could be converted into curds and cheeses. Fruit juices often acquired new and potent powers in the new containers; the prohibition problem was born with the jug. Like other inventions pottery could be put to both social and unsocial uses.

## E. TEXTILES

1. ORIGIN: Although spinning and weaving are complementary techniques they were not necessarily related in origin. Weaving in its simplest form consists of laying or stretching a number of fibers in the same plane, parallel to each other (called the warp), and then passing other fibers (called the woof) through them at right angles, in the same plane, so that they pass alternately over and under each successive strand until a solid surface is formed. The elements of such a technique are found in the basketry and wattled work of Mesolithic peoples. Spinning was not a prerequisite as it is today in the cloth-making industry. Leather thongs, natural fibers such as reeds or vines, and even small branches were used to produce mats and baskets.

Spinning consists of twisting a number of short fibers in such a way as to form a longer and stronger thread. It probably originated independently of weaving. Neolithic man required fishing lines and other cords longer and

tougher than leather thongs. Perhaps the idea of spinning came from the tendency for leather and other non-spun fibers to twist in use. The increased strength was certainly noticed by the user. Thus it appears that spinning and weaving were practiced by man long before they were applied to animal or vegetable fibers. The production of cloth fabric was a later development resulting from the combination of the two techniques.

2. SPINNING: The spindle and distaff were the only mechanical aids used by spinners until early modern times. Spinning of fine, short fibers such as wool and flax consisted of twisting the fibers between the thumb and fingers while gently pulling the newly formed thread. The problem of keeping the thread under slight tension was the function of the *spindle*, which consisted of a weighted stick dangling and revolving at the end of the thread. When the thread became long enough for the stick to reach the ground it was wrapped around the spindle, fixed in a nick, and the process continued. To produce greater tension, to maintain an even rotary motion, and to keep the newly coiled yarn from slipping from the lower end, a stone or ceramic whorl was often affixed to the large end of the tapering spindle shaft.

The loose, combed fibers were ordinarily attached to another stick, called the *distaff*, which the spinner held in her other hand and from which she regularly pulled more fibers into the steadily lengthening yarn. Although these two simple devices aided the spinner they did not greatly increase the rate of production. Even in medieval times an expert spinster could produce only three spindles or about 600 yards by working at top speed from sunup till sundown.

3. WEAVING was a more difficult task and required greater mechanical aid, in the form of a *loom*. Until well into historic times the loom consisted of a stout frame on which were held the numerous parallel threads constituting the warp. The thread which was passed across these (the woof) was coiled on a convenient spool called the shuttle. A thin, smooth stick was usually first threaded

across the warp, over and under alternate threads. This stick aided the weaver in passing the shuttle correctly through the warp and assisted in packing the woof strands tightly together as the cloth progressed from the bottom to the top of the frame. Since the woof thread had to be passed back and forth by hand and since only one person ordinarily operated a loom, the finished cloth did not exceed the length of the operator's arm. Not until the eighteenth-century revolution in production methods did cloth ordinarily exceed a yard in width. The loom underwent improvement but only to the extent of speeding up the process by mechanical alternation of the warp threads.

In spite of the newly coordinated and improved techniques of spinning and weaving, the clothes of Neolithic people consisted mainly of hides. The small amount of cloth that was produced was used mainly for shawls and covers. Man was aided as much by the older textile techniques of knitting and platting as by the newer cloth-producing process.

### III. SOCIAL ORGANIZATION

Village life produced an entirely new pattern of economic and sociological activities. The tending of animals, the cultivation of grains, the production of ceramic utensils and polished stone implements, the construction and repair of substantial buildings, and the many new domestic techniques all combined to create a routine of daily life which stood in sharp contrast to that of the Paleolithic period. Comparatively large numbers of families living in the restricted area of the village made the need for social control of the individual greater than ever before. With all its gains in production techniques and knowledge Neolithic culture was still economically too poor to afford innovations and experimentation by individuals. An economic surplus had not yet appeared. The forces of nature were still largely beyond man's control. Although the reserves of food in stored grain and herds enabled man to withstand

disaster more successfully, the rude security of village life was still constantly threatened by flood, droughts, and high winds. Social control, however, was an inherent part of the daily round of life rather than the function of certain persons in the village.

### A. SOCIAL CONTROLS

1. ATTITUDES: Chief among the factors producing the adjustment of individuals to the pattern of the group were the attitudes which villagers unconsciously acquired in their daily life.

*Orderliness* was an inevitable consequence of the routine which animal husbandry and crop cultivation enforced. Such chores as feeding, milking, planting, hoeing, reaping, and threshing had to be done with unerring regularity or the welfare of both the individual and the group suffered. The convenience of well-placed permanent houses, the accessibility of stores of grain and fodder, and the quality of well-executed pottery techniques all combined to promote this attitude. From Neolithic times to the Industrial Revolution of the eighteenth century, this attitude has characterized the inhabitants of villages and towns.

The daily round of village life engendered two closely related attitudes: respect for property and thrift. *Respect for property* was a wholesome point of view in a society where material wealth could only be obtained by unceasing physical efforts. It was the intellectual counterpart of the productive activity which included all forms of work essential to the physical well-being of the group. These productive techniques were used mainly in the creation of tangible and immediately useful objects. In a handicraft society they represented an extension of personality into the physical environment. Everyone appreciated and respected property in the Neolithic village because everyone had experience in the labor required in its production. Even today one comes to respect an activity or a product to the fullest degree only after he has experienced the



problems involved. The vast and intricate economic structure of our modern world with the large-scale, mechanized production of most articles has caused city inhabitants to value things only in terms of market price. Their attitude is one of disrespect for property as expressed in tangible goods. The villager lived too close to reality to confuse values. To him, as to all peasants and inhabitants of towns until the Commercial Revolution of the sixteenth century, property expressed use-values rather than market-values.

The scarcity of material goods in a Neolithic village promoted the attitude of *thrift*. The individual as well as the group lived well to the extent that they conserved, and wisely utilized, their material wealth. Thrift meant a reserve and this meant safety and security against the hazards of nature. Life was good in direct proportion as the group had reserves to meet the lean years of adversity. This attitude fitted the social pattern of all societies which carried on the processes of economic production without power machines. Today when individuals practice thrift they are likely to produce forces in our economic structure which are almost certain to cause periodic breakdowns and thus make saving the cause of the very condition it is designed to prevent. The process of saving reduces the purchasing power which reaches the market and thus helps to cause "overproduction" and business depressions. As we shall see, power technology has changed our economic order from one of scarcity to one of abundance. Today, our industrial civilization is rapidly becoming so productive that saving is something it does not need and cannot even afford. Thrift, in the sense of saving, is today rapidly becoming an anti-social attitude.

Other attitudes reflected the cultural pattern of village life and kept the individual in harmony with group interests and welfare. At no other time in the world's history was *equality* so real as in the Neolithic village before the rise of institutionalized warfare. Economic scarcity reduced all

to a subsistence level. Class differences did not rest upon economic possessions. The Shaman and warrior class received little beyond that required to maintain themselves and to perform their services. They did not become exploiting classes until after the rise of the economic surplus and its inevitable accompanying property rights.

This attitude is still found today in small towns. The few poor families are generally the victims of some temporary misfortune and are usually assisted by neighbors until they regain their self-supporting status. One or two families may be well-to-do, but the range of wealth is not great. A feeling of equality and "belonging" is promoted by the fact that most citizens go to the same church, deal at the same stores, pass along the same thoroughfare, and actively participate in the same organizations. The industrial city, however, stands in sharp contrast. Nowhere else is there greater concentration of wealth and less equality.

The analogy between the Neolithic village and the small town today can be seen with regard to another social-control attitude. *Respectability* was a function of the "gossip group" and consisted of behaving in socially approved though not necessarily moral ways. Face-to-face contacts of everyday living made the opinion of one's neighbors a powerful agency of control. For the majority of small-town citizens it would be easier to endure physical torture than to be the subject of gossip. Respectability was a powerful agency for the direct control of all members of the Neolithic gossip group. In this respect the industrial city represents a marked contrast in its impersonality.

## B. VILLAGES AND HOMES

1. LOCATION: Neolithic villages spread widely over Europe along the edges of the forests, on rivers, lakes, and in loess-soil regions. Two primary requisites for villages were an abundant supply of fresh water for the domesticated animals and easily tilled soil naturally free from trees. Fortunately these two physical requirements frequently

occurred together. Limestone ridges and loess soil were hostile to tree life. The former were cut by river valleys and often studded with lakes of glacial origin. Loess soil was often thickest along the flood plains of rivers.

In late Neolithic times thinning of the forests caused the spread of pillaging nomadic tribes and of conquering northern peoples. Protection became a new factor in village construction, and sites offering a commanding view of the surrounding country or affording natural barriers against invasion were often selected.

In general Neolithic villages can be divided into two geographical areas. The eastern area followed the Danube and its tributaries and reached as far west as Württemberg and Alsace. Moravia was perhaps the most typical region of this division, while the Swiss lake dwellers were the most unique variant. Water and loess soil were the primary physical determinants in most Danubian villages, for not until late Neolithic times did the conquering nomads invade this region and make fortified and lake villages a necessity.

The second area lay along the Atlantic seaboard, especially in the lower valleys of rivers. Villages in this area were smaller in size and fewer in number. Water and loess soil were important but trade also seems to have been a factor in determining location. The "mining towns," exporting roughly formed and finished tools, belong in this division. Characteristic features of these villages were the Megalithic tombs and monuments. These and other artifacts have caused some authorities to believe that seaboard villages carried on a wide trade with each other.

So far as known, Mediterranean peninsulas were free from Neolithic villages. The mountainous backbone of Europe was a more effective barrier than the northern forests, for even when the forests thinned and Neolithic populations spread over a wider area this region remained conspicuously free from towns.

The details of the actual homes of the villagers are better known and yield more facts concerning the economic and

sociological processes of Neolithic culture than the geographical distribution. In physical layout Neolithic villages were of two principal types—those built along rivers or the seacoast and those built in the shallow waters of lakes.

2. LAND VILLAGES varied greatly as to size and plan. In general, the houses were built around a large open space which served as a "public square." When a considerable number of houses comprised a village they were often built along one or more streets radiating out from the square. Around this cluster of houses stretched the cultivated fields and pasture lands.

The first Neolithic migrants into Europe probably brought herds of domesticated animals and followed the easy grade of rivers until the limestone foothills or wider loess-soil flood plains afforded a convenient location for permanent settlement. The forests were avoided not only because stone axes were no match for the oaks, which were very numerous, but also because they harbored wild animals which found domesticated cattle easy and luscious prey. The Danube region was probably the avenue of entrance into Europe for Neolithic peoples. The earliest settlements in that region were villages composed mainly of pit dwellings. Later, as the building techniques of man increased and as tangible property offered worth-while prizes for pillaging nomads, more substantial post-house villages were built and surrounded with palisades and moats.

a. PIT DWELLINGS take their name from the fact that they were built over circular, flat-bottomed pits six to ten feet in diameter and one to two feet deep. This sunken emplacement could only be used on relatively high, well-drained land, but it possessed several distinct advantages. It simplified construction by reducing the height of walls and giving them increased strength to bear the roof rafters. Low exposed walls of upright logs offered less resistance to windstorms which must have often attained considerable velocity in treeless regions. The sunken emplacement

added considerably to the internal warmth of these ill-heated huts.

In the larger of these huts the roof consisted of a wattled construction of light poles tied to the wall supports and often plastered with mud. Smaller huts often had the walls and roof as a single unit of wattled saplings stuck in the ground around the periphery of the pit and slanting upward tepee-fashion to form a cone. Such walls were either covered with skins or daubed with mud to render them windproof and rainproof. Both types usually had a hole in the center of the roof for the escape of smoke, although in some villages small huts without provision for fire were used as sleeping quarters while larger huts with hearths served as general living rooms. The most unique feature of pit dwellings was the food pit, which consisted of an inverted coneshaped hole about three feet in diameter at the brim and five to six feet deep at the apex. These were found in each of the larger-type huts.

b. POST HOUSES were much advanced over the pit huts. They take their name from the construction of the walls, which consisted of heavy logs driven into the ground at intervals of three or four feet. The spaces between these upright posts, which with the corner posts formed a large rectangle often twenty by thirty feet, were filled with trellised framework plastered with mud on both the inner and the outer side.

The large rectangular area of the post house was frequently divided into two rooms by a central transverse partition. Sometimes one room served as sleeping quarters but all too frequently it served as a stable for domesticated animals. Even this did not prevent its being used as a bedroom for the family on cold winter nights when the warmth of the animal bodies prevented frostbitten toes.

The living quarters of these houses usually contained a large hearth of stone, especially when floors of split logs were used, and a food pit similar to those already described. In some of the one-roomed earth-floored houses a straw-

covered and elevated platform along one wall served as sleeping space and doubtless saved many a villager from rheumatic ills. A single wall opening served as window and door. The smoke hole in the roof supplied a little additional light.

3. **LAKE VILLAGES:** The villages built along the shallow edges of Swiss lakes are perhaps the least typical but the best known of Neolithic times. The accidental or intentional dropping of all kinds of artifacts into the soft mud bottoms of the lakes has preserved the most complete record of Neolithic culture yet discovered. The primary factor in the location of such villages seems to have been defense, first from preying animals in the surrounding forests and later from pillaging humans. The village stood upon a pile-supported platform. The enormous expenditure of human energy can be appreciated when we learn that often more than fifty thousand piles were necessary for a village. The houses closely resembled the post type already described.

Lake villages were undoubtedly more sanitary than land villages since the lake acted as a convenient method of disposal for all waste products. From a standpoint of protection they were ideally situated. Stores of grain and other food were safe from rodents. The modern practice of building corn cribs and granaries on posts to protect them from vermin and rodents is supposed to be a survival of the pile villages. In the earliest types a single narrow bridge often connected the village with the mainland but later boats were the only means of communication. The most vulnerable parts of lake villages were the fields and pastures along the shore. Probably a certain number of cattle were kept in their stalls on the island village as the nucleus of a new herd if pillaging armies succeeded in capturing those in the pastures. These stabled animals together with large stores of grain and easy access to a supply of fresh fish must have made these villages largely siegeproof. However, certain features did not serve man so well. The wooden

platform upon which the village was built made fires especially disastrous. The charred ends of piles are the mute evidence of the razing of whole villages by fires starting from hearths, lightning, or the attack of foes.

### C. CLASSES

The increase in wealth-satisfying goods made possible by domesticated animals and plants, ceramics, and textiles resulted in settled habitation and greater industrial effort for the majority of Neolithic peoples. However, a new menace appeared in the form of the man-made destruction called war. This unfortunate aspect of society's activities increased when nomadic tribes invaded Europe during the late Neolithic period. Unattached groups living upon herds found the pillaging of villages easier and probably more exciting than the arduous industrial and crop-growing occupations. The defense of property became an important part of the social process. Those engaging in the seizure of material goods came to occupy a social position eclipsing that of the Shamen or priests. Without the Shaman to ward off the constantly threatening dangers of the spirit world such as floods, droughts, and violent storms and the warrior to repel the attack of pillaging hordes, the wealth produced by the unremitting efforts of the majority of the villagers would be destroyed or stolen and their very lives imperiled. Similarly the inducing of rain, sun, and other essential elements by the magical rites of the Shamen, and the acquisition of a larger stock of animals, tools, or other forms of tribute by the brave exploits of the warriors enhanced the material welfare of the group. Thus from the time of their origin, social sanction was given those individuals who served in the capacity of *priest* and *soldier* and thus were sown the seeds which grew into the powerful exploiting classes who ruled the masses in the later Temple Towns and built empires from the captured herds of conquered peoples.

## IV. SUMMARY

Village culture marked the second great step in the evolution of man's economic organization. During the twenty-five thousand years of the Mesolithic and Neolithic periods man made much greater progress in his control of the physical environment than in the third of a million years which preceded. With domesticated animals and the regular cultivation of grains he was able to provide ever-increasing numbers with a regular food supply. The larger forces of nature still harassed him but he could more definitely and comfortably endure the rigors of seasonal changes as well as floods and droughts. His substantial buildings afforded protection from cold, dampness, and intense heat. Earthenware, textiles, and better stone implements furnished the basis of a more satisfying consumption level as well as the basis for more efficient productive activities. The pattern of life centering around a fixed abode, animal husbandry, and cultivation of crops laid the basis for conventionalized group behavior which developed into institutions. With the economic basis of life more certain man could turn his attention to a few of the social aspects of group organization. The real bases of civilization—the economic surplus and writing—had not yet appeared. Even classes were in the most embryonic state. But the crude framework of an enduring social organization had been laid and the emergence of the earliest exploitive culture—the Temple Town—was but a short step in the cultural evolution.

## V. TEMPLE TOWN CULTURE

The most spectacular feature of Temple Town culture was provided by the rise of exploiting classes. By gaining control of the economic surplus and using it to provide beautiful temples and magnificent palaces these classes left monuments which still excite the envy and admiration of tourists. The origins of the culture which produced



them are found in the combination of two factors: extensive migrations, and favorable physiographic conditions.

### A. ORIGINS

1. **MIGRATIONS:** The increasing population in Neolithic villages was a result of the greater security of life which arose from cultivation of plants, animal husbandry, and fixed abodes. In some instances the pressure of increasing population caused nomadic migrations, in others simply an expansion of the group into a larger territory. Probably when a group became too large for the natural resources of a region to support, some of the younger members detached themselves and with their share of animals, seeds, and tools set forth to find a more favorable location. Sometimes these groups became nomadic but frequently they found very favorable sites and established a new Neolithic cultural center.

2. **PHYSIOGRAPHIC CONDITIONS** were sometimes especially favorable and offered entirely new cultural possibilities. For example, the migrations of such groups as the Babylonians and the Egyptians into the river valleys, where they found rich alluvial soils, level flood plains, and an ample water supply, could hardly fail to produce important modifications in the cultural pattern of the migrating group. The great fertility of the soil as compared with the limestone-ridge and loess-soil areas made possible a comparatively sudden increase in the available food supply. Even the climate, which in many instances permitted two crops a year, contributed to the building of a new culture.

The combination of the increased powers of man with the unusually favorable physical circumstances produced a result entirely new in human experience. For the first time groups were regularly able to produce goods in quantities which were more than sufficient to meet the physiological needs of the entire population. It is true that Neolithic men had sometimes accumulated small stores of grain as well as herds of domesticated cattle. These stores were for

seed or breeding purposes and could not be used for food although they were in excess of the amount required for consumption. To eat the seed surplus would rob the group of its ability to produce a future crop. The same situation applied to the small herds which were carried over from year to year. In some unusually favorable years the Neolithic group had found itself with a crop large enough to provide all the essentials for the group subsistence, all the seed required for the next year's crop, and something in addition. Such fortuitous surpluses only occurred occasionally and because of their temporary character cannot be regarded as constituting a true economic surplus.

## B. BASIC FEATURES

1. THE ECONOMIC SURPLUS was an entirely new phenomenon. Only when goods are produced in a quantity more than sufficient to satisfy the basic and vital needs of all members of a self-sufficient group can an economic surplus be said to exist. This does not mean that goods must be sufficiently abundant to supply all the wants of all the members of the group, but it does mean that there must be more than the minimum required for group subsistence. Such a surplus is not incompatible with scarcity and does not imply an economy of abundance. In a group enjoying an economic surplus goods are more than sufficiently abundant to meet the necessities of the group but not sufficiently abundant to satisfy their wants completely. Therefore, in spite of the existence of an economic surplus the society may be characterized as one of scarcity since goods are relatively scarce in relation to human wants.

The nature of the economic surplus can be made clearer by an example. Assume that the amount of goods essential to maintain the physical vigor of a normal person can be represented by 1 bushel of wheat per year. Then a self-sufficient group of 1,000 persons will require 1,000 bushels of wheat each year. Of course a harvest of exactly 1,000 bushels would mean an inadequate amount for consump-

tion, since some must be saved for seed. If 200 bushels are required for seed then 1,200 bushels would be the minimum satisfactory harvest. If the group of 1,000 people should *regularly* harvest 1,500 bushels, the extra 300 would constitute a true economic surplus. The role of such a surplus in shaping the pattern of Temple Town culture can be more fully appreciated by considering the problems presented in its distribution and use.

First, the extra 300 bushels of wheat could be distributed equally among the members of the group so that each would get another three-tenths of a bushel. If the individuals used the extra allotment for food the direct and immediate satisfactions of the group would be increased. If, on the other hand, it was saved by some individuals for seed it might become the basis of an increase in production the next year. If the share of such an individual were isolated from the general stock of seed and its product recognized as belonging to him private property rights would be involved. When personal rights to possess and to use productive goods are recognized by the group private property is an accomplished fact.

Second, the group might collectively use the economic surplus to augment future production. This, of course, would only postpone the problem of how to use the product of the surplus or the new and larger economic surplus of the next and succeeding years. Even if an equal division of all the surplus not used productively were made annually, the problem of property rights could not long be avoided for soon each individual would acquire a share of wealth which would enable him, like the group, to invest his surplus for a larger future return. The economic surplus, therefore, made the institution of private property inevitable in every society where it arose.

The question of how to use or to distribute the economic surplus probably never arose as a social problem. The actual distribution of the earliest surplus was not a matter of theoretic possibilities but of the social recognition of the

claims of certain emerging classes upon it. The social recognition of the claim of an individual to a specific product always creates property rights.

2. PROPERTY: In all primordial cultures the right of an individual to control specific items of wealth was confined to a few personal possessions such as clothing and implements. It is not definitely known what relationship existed between the individual Neolithic villager and the more durable forms of wealth. If the behavior of living primitives is a reliable guide, it is probable that fields, houses, and herds were collectively rather than individualistically held. The group was too poor to afford private rights for individuals. So long as a group is close to the bare level of existence, that is, without an economic surplus, no individual or even group can hold any item which might jeopardize the existence of others. When all have less than that required for assured continuous physical existence no one can secure more than an equal share. To attempt to hold more under such circumstances produces forceful dispossession by the deprived members of the group. No group has ever sanctioned, that is, given its approval and support to, the control of productive wealth by an individual or integral group until all have attained the basis of physical existence.

3. ECONOMIC CLASSES: Property rights were a product of the social recognition of the claims of a certain person or group upon the economic surplus. Once possessed of property rights a group quickly develops class distinction. A social class can, and often does, appear without property rights. Class is merely a recognized difference in social status. When the difference is based upon physical or mental attainments the class is *social*. But when the difference is based upon the possession of socially recognized rights to use or command wealth the class is *economic*. The Shaman and warrior had come to constitute social classes in late Neolithic society. Members enjoyed certain prestige and even relief from economic activity but their position

did not depend upon the amount of goods they held or consumed. The transition of these two classes from a social to an economic basis was a direct result of their converting their claims to the economic surplus into recognized property rights. Let us consider the rise of each of these classes to a position of control.

a. THE PRIEST (SHAMAN) CLASS made the earliest claim upon the economic surplus. By late Neolithic times the services of the Shamen had permeated almost every phase of life. Their services were sought by the hunters and cultivators, by the sick and the feeble, by those in love and those in trouble; in fact all groups and individuals sought their counsel and aid in matters beyond ordinary knowledge and skill. To serve such large demands the Shamen found it necessary to devote all their time and energy to magic and service. They received their keep from the rest of the group, each of whom gratefully gave them a portion of his meager share. The Shamen had gradually become differentiated from the common men through many centuries because of their mystical powers and because of their exemption from the ordinary tasks of life. They became the first social class in primitive society. When the economic surplus appeared it was easy for this class to lay claim to a large part of it. The general population probably did not oppose the claim advanced by the Shamen. After all what better use could the group find for the economic surplus than to dedicate it to the powers which the group credited with making the surplus possible?

The Shamen themselves did much to justify the confidence of the people. They used the economic surplus to build temples as expressions of man's recognition and appreciation of the powers of the supernatural world. At the same time the temples provided an abode for the Shamen and a new and properly impressive setting for the magic and sacred rituals which they performed. These temples quickly rose in every town enjoying the benefits of an economic surplus and became the nucleus which gave

the new culture its dominant characteristic. The very term *Temple Town* indicates the primary position which the new priest class occupied. Just as the temple stood in the center of the town, so the priest class stood at the apex of society.

b. THE WARRIOR (MILITARY) CLASS: The economic surplus was not the undisputed prerogative of the priest class, however. Even in late Neolithic times the increased relative wealth of some villages had made them the objects of attacks by nomadic groups. War-like nomads found the seizure of existing wealth easier than the production of new wealth. To protect the villagers from the new man-made danger of invasion, warriors had arisen in the once peaceful villages. Gradually, as the technique of warfare advanced, the Neolithic warriors became one of the essential "kept classes"; that is, the villagers supported them, as they did the Shamen, out of the products of their hoe culture and animal husbandry. When Temple Towns arose and the material wealth of the group increased, the services of the warriors became proportionately more important. Of course, the warriors had no higher power upon which to base their claim to the economic surplus. However, several circumstances combined to establish them as a new economic class on a par with the priests of the new temples.

In the first place, the danger of invasion threatened all the inhabitants of the new Temple Towns. An invading army had no more respect for the wealth of the priests than for that of the rest of the population. In fact, the temple usually housed the finest products of the group and the rarest of its possessions. Victorious raiders could more easily carry off the gold and silver implements of the temple than the cattle or women of the village. A mutually interdependent status was established between the priests and the warriors. The priests protected the warriors from the supernatural world; the warriors protected the priests and their valuable property. Of course, the underlying population, which created the wealth necessary to the

existence of all, paid handsomely for the dual protection of the two new classes.

With the rise of warfare, man developed a *dual conception of morality*. Within the village honesty, cooperation, and kindness conduced to group welfare and were considered proper and moral. Attitudes such as deceit, hatred, and cruelty worked havoc within the group and were condemned as improper and immoral. But toward people beyond the limits of the village walls these attitudes were reversed. To lie, cheat, pillage, or even murder outsiders not only protected the group from its enemies but often augmented its wealth. The *in-group*, consisting of those economically interdependent, became sharply differentiated from the *out-group*. Terms such as "friend" and "enemy" arose to designate the new relationships. Even the mythology began to reflect the situation. The spirit world became a duality consisting of those eternally trying to aid man and those eternally trying to destroy him. Good spirits were those favoring the in-group; evil ones favored its enemies.

These attitudes and circumstances gave the military class a strong position in the cultural pattern of the Temple Town but afforded no basis for claiming any part of the economic surplus beyond that essential to the performance of its function. The warriors might never have developed into an economic class had it not been for a second set of circumstances growing out of the new cultural pattern.

When nomadic invaders conquered Neolithic villages and remained in possession of them the conquering leader set himself up as the ruler of all and dictated the procedure of exploiting the vanquished. His ability to extract tribute depended upon increasing the total wealth produced by the conquered villagers, since no exploitation was possible in the absence of a surplus. The failure of Neolithic groups to produce a true economic surplus probably accounts for the fact that early Neolithic nomads were more interested in raiding and pillaging than in conquering

and ruling an area. With the appearance of an economic surplus the situation changed. The successful conquest of a Temple Town gave to the new military leaders the economic basis for a permanent exploitive position.

Once firmly established as a *ruling class*, the professional warriors had little difficulty in acquiring control of a large part of the economic surplus. Since the physical conditions producing it were relatively constant the primary factor determining the size of the surplus was the amount of human energy expended in productive pursuits. The activities of the dependent population centered around these productive pursuits. Some were members of the in-group and enjoyed freedom to produce for themselves or to engage in trade. But through conquest the military classes augmented the population of Temple Towns with captured slaves from out-groups. Slavery became the basic source of the economic surplus and consequently the foundation upon which the so-called civilization of the control group was founded.

The position of the priests and warriors was secure. The services and products of the masses as well as the choice land of the community were commanded by the priests as representatives of the supernatural. The ruling warrior class gained land and the slaves to work it by the simple device of taxing the native population (for defense) and capturing the younger persons in out-groups.

c. THE MASSES: Below the exploiting classes at the top of the class hierarchy worked the *free citizens* and *slaves* of the Temple Town. The relatively small middle class consisted of craftsmen, landowners, and merchants. The craftsmen produced articles of luxury and sold them to the wealthy control classes or directed the erection of temples for the priests and monuments for the victorious military leaders. The farmers either worked such land as they were able to acquire or became members of the landed aristocracy, which managed crews of slaves on the great estates of the rulers. As the scope of empire advanced



and technology developed merchants appeared in the Temple Towns. Like the craftsmen they were engaged chiefly in the movement of building materials and rare objects for the temples and palaces. The politically free middle class never attained great size in any Temple Town civilization. Its members tended to become divided into two distinct groups—the wealthy and the propertyless. Always a few rose in each generation into positions of rank and power as the result of acquiring wealth or of serving the ruling classes well. But always a greater number sank into the purgatory of poverty-stricken freemen who enjoyed the empty right of personal freedom but who were denied the economic security of the slave.

Slavery was the status of the vast majority of all Temple Town populations. The unfortunate victims of military conquest and of slave birth furnished the motive power of a civilization without engine power. The material accomplishments of the mighty empires from Assyria to Rome were built upon the crushed and broken bodies of millions of unfortunate wretches.

Of these the craft slaves were the most fortunate, for they possessed skill in some trade and were quite valuable and, therefore, relatively well treated. The field slaves on the other hand were simply laborers receiving a scanty supply of food and even less clothing. But the gang slaves found their lot the hardest of all. They were worked under the lash and were sometimes rented to any person who needed laborers. Their treatment was extremely harsh and their life expectancy very short. Frequent additions of war captives maintained the supply. Slave labor was a feature of practically all important cultures from Neolithic to modern times.

4. WRITING: The rough division into the working and the leisure classes produced an intellectual dualism. Writing was developed and learned by the leisure classes and used as a means of preserving records, whereby they entrenched their property rights and exploitive privileges. The great

mass of the people never learned to read or write. As a result of this general illiteracy and the division of the population into mental and manual workers the intellectual stream was split into two parts: the "high" and the "low" tradition. The rural classes (manual workers) carried on the low (primitive) tradition almost to modern times while the town dwellers who lived by their wits transmitted the high tradition and developed an ever more complex mass of intellectual devices such as law, government, and philosophy.

### C. EXTENT AND SIGNIFICANCE

For nearly ten thousand years after its first appearance in the rich river valleys of Mesopotamia and Egypt, Temple Town culture flourished as the dominant pattern of the white race. The priests and warriors of Babylonia, Egypt, Assyria, Macedonia, Greece, and finally Rome extended their sway over increasing numbers of humans and vaster areas of natural resources. The specific features of each of these integrated groups became increasingly varied and complex, until by the beginning of the Christian era the Roman empire under the Caesars had developed a political, economic, and social organization of such detail and complexity that even today scholars are trying to understand all its intricate parts. But the basic cultural pattern did not change. The parts became larger and the internal relationships more numerous but the old stratification of society into exploiting and exploited classes remained essentially the same. The purposes of the dominant classes persisted unchanged. The military leaders and spiritual soothsayers used the forces of nature, the technology of the day, and the energy of the underlying population for the creation of a larger economic surplus to be used for the satisfaction of their wants and the perpetuation of their power. Throughout the elaboration of the Temple Town pattern the institutions governing man's socio-economic activities remained essentially the same. The

exploiting rulers, priests, and warriors directed the energies of the underlying citizens and millions of war-acquired slaves to build a finer material civilization for themselves and to extend their domination over weaker groups.

Under the Romans, Temple Town culture reached the pinnacle of its growth. With the most worth-while parts of the known world within their power the exploiting classes of Rome turned from outside conquest to more intensive internal exploitation. They were aided by the institutions of property, government, and slavery. The ruling classes of Rome farmed out the land, and the dependent peoples of the empire, to favorites or to the highest bidder and turned their attention to finding new satisfactions in luxurious living and sensuous debauchery.

So grandiose were the struggles of the ruling classes in these civilizations that historians fell into the error of writing history in terms of the activities of these classes rather than in terms of the less spectacular but infinitely more important struggle of the average man to satisfy his basic wants. The dramas of Babylonia, Egypt, Assyria, Greece, and Rome are but one-act plays, each mightier than its predecessor, depicting the elaboration of the same fundamental cultural pattern. With their details we are not concerned. We have already set forth their basic outline. What specific contributions they made to the evolution of modern society we shall note when we study the rise of Commercialism. The enduring phases of classical culture came into our present cultural stream not directly but by a circuitous route through Moslem civilization. Not until after the Crusades did western Europe receive the bulk of the accumulated knowledge of Greece and Rome from the Saracens, who had been its keepers during the long centuries when feudalism grew in the hinterland of the defunct Roman civilization. The forces of cultural decay spread without a new cultural pattern evolving. No marginal group possessed the background and technical equipment necessary to take over and operate the Roman

culture. The fringes of the empire were harassed by bands of raiders who possessed a cultural organization which stood in sharp contrast to the Temple Town pattern and which played a significant role in the evolution of feudalism.

### STUDY QUESTIONS

1. How can the complete disappearance of Paleolithic culture from Europe be explained? Compare the character and consequences of Mesolithic and Neolithic climate.
2. Describe the topography of Neolithic Eurasia. Which features were most significant in conditioning the location and evolution of Neolithic villages? Why were the dense forests and Mediterranean peninsulas practically devoid of villages?
3. Distinguish domesticated, tamed, and wild animals. Of what does domestication consist? What evidence can you cite that domestication of animals was more the result of changes in the physical environment than of man's deliberate effort? What are the most economically significant domesticated animals today? Where are they found?
4. Distinguish hoe culture from agriculture. What plants were among the earliest to be cultivated? How important are they today? Enumerate the steps or stages in the current plant-production cycle. To which of these did man first devote his attention? Why? Enumerate the chief crop-producing tools and compare them with modern equivalents.
5. Evaluate the economic and social effects of animal husbandry and hoe culture. What relation is there between these food-producing techniques and modern industrialism?
6. Compare Neolithic with Paleolithic tool-producing techniques. What is a tool? Upon what does its efficiency depend? Which Neolithic implements indicate the greatest technical advance? What is the economic significance of Neolithic tool-making techniques?
7. Discuss the problems encountered by Neolithic pottery makers and the methods used to solve them. Why is decoration of little economic significance? How do pottery forms and shapes reflect the economic development of Neolithic villagers? Evaluate the cultural effects of pottery.
8. Distinguish the inventive and discovery phases in the evolution of textile techniques. What were the nature of and causes for the chief limitations in Neolithic cloth production? Why were textiles of less economic and social significance than pottery in the Neolithic village?
9. What relation existed between Neolithic man's attitudes and his occupations? Between his attitudes and village life? What modern attitudes are direct descendants of Neolithic ones? In what parts of

- our cultural pattern are they most evident? Why? What attitudes underwent the greatest change as the Neolithic village gave way to the Temple Town? Why?
10. Evaluate the chief factors determining the location and plan of villages. What features of Neolithic culture are reflected in the construction of houses? What modern survivals can you cite? What were the most conspicuous differences between a Neolithic village and a Temple Town?
  11. Enumerate five ways in which the average inhabitant of a Neolithic village found everyday living more secure and enjoyable than did a member of the Paleolithic hunting pack. Compare the abilities, techniques, and attitudes of Paleolithic and Neolithic man.
  12. How did Temple Town culture originate? Distinguish the economic surplus from all other types of surpluses. Summarize its role in the evolution of a new cultural pattern. How do social classes differ from economic ones? Trace the rise of the priest and military classes. Compare the rise, size, and functions of each of the classes in the Temple Town hierarchy. How did the rise of Temple Towns affect the fundamental organization of society? Why are classical civilizations not treated in detail?

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## Part III · *Feudalism*

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## *Chapter Four*

# Agricultural Feudalism

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## I. HISTORICAL BACKGROUNDS

Feudalism as a culture evolved its structure and unity from three sources: Roman decline, Teutonic practices, and Church organization. Its dominant economic institutions grew from the interplay of Roman and Teutonic influences. Its ideology and its pattern came from the great Christian Church, which evolved as a unifying force in a world of chaos and plunder. These forces came to a focus upon the place where feudalism took its most significant form—the British islands and the northwestern fringe of Europe. The exploitive activity of Roman nobles, the increasing European raids of the Teutonic tribes, and the emergence of a new and more dynamic religion all combined to produce a new social pattern.

## A. ORIGINS OF FEUDALISM

1. **ROMAN DECLINE:** As the ruling classes in Rome became aware of the discontent of the conquered provinces and exploited groups at home, they moved to protect their own immediate possessions and property. From the remote edges of the empire, England and northern Gaul, they withdrew their legions to serve in the suppression of slave revolts at the very gates of Rome. Once the military power was withdrawn, the “law and order” on which Rome so

prided itself became an empty gesture. Large provincial landholders, who once worked thousands of slaves, suddenly found themselves without laborers. Their vast estates offered rich booty to roving bands of warriors who lived by pillage. Small farmers were little better situated. The citizens of villages found both home and life endangered. The basic elements of life itself—food, shelter, and clothing—were jeopardized as bands of revolting slaves and other desperate groups sought the short-lived satisfaction of plundering under the leadership of the gangsters of that day. In desperation people everywhere sought to make life secure and to salvage their possessions by any available means. Trade slowly dwindled until some sections became isolated. The only remaining source of subsistence was the land of the local community and the energy of its people. To secure protection and assure livelihood the institutions of feudalism evolved in many areas. During the fourth, fifth, and sixth centuries in England and Gaul feudalism took form.

2. TEUTONIC PRACTICES: After the withdrawal of the Roman legions from England in the fourth century the Teutonic ideology and social organization laid the basis for a primitive economic form of feudalism. The most basic institutions of feudalism centered around the relation of man to land, and man to man. In the Teutonic tribes everyone was of equal social standing. Land was owned in common by the group. It was held and used individually, not by permission of a military leader or overlord but as a right of citizenship in the tribe or clan. *The alodial share* of the individual in the common lands required no service to any person. Such shares were one of the privileges acquired simply by being a member of the group. Every freeman was required by custom to serve in the host (army) and in the witan council for the protection and administration of the tribe and its lands. The tribal army was headed by a leader to which all males were bound by a tie of *comitatus*. This did indicate that all were subordinate

to the leader and were required to obey his commands. This type of subordination was military and had no effect upon the everyday economic life of any member of the tribe. These two relationships of man and land were carried to England by the Angles and Saxons, who found the native Britons easy to conquer after the withdrawal of Roman legions. As a result of the imposition of such Teutonic patterns on a native population somewhat imbued with Roman ideas of class and property, the early feudalism of England incorporated elements of both Roman and Teutonic practices. The conquering tribes assumed a position of superiority but did not enslave the natives, and the status of noble and vassal slowly evolved.

3. CHURCH ORGANIZATION: Not until the Church was able to enlist the support of the majority of the population and could bring a system of temporal as well as spiritual leadership to large areas could English feudalism be called a new cultural pattern. One of the steps toward increased unity in early English feudalism was provided by what is often called the second Roman invasion. In 579, St. Augustine and 40 monks appeared in England as representatives of the new Church and did much to bring harmony into the contending feudal bands by initiating them all into the Christian brotherhood. Even then the rise of certain military leaders to a governing position did almost as much as the Church to determine the pattern of the system. Feudalism was a dualism at its very apex. Church and state were dual and overlapping powers binding the people of England and other regions into a functioning cultural complex. During the centuries between 579 and 1066 the Church and state helped southern England to attain a form of social and economic organization which was truly a new cultural pattern.

## B. ENGLISH FEUDAL DEVELOPMENT

The mature politico-economic feudalism which flourished in England from the eleventh century until the six-

teenth was more complex and much more stable than that which existed prior to the Norman conquest of 1066. During the centuries when the simpler economic basis of feudalism was being laid in England a somewhat different type was being developed across the channel in former Roman provinces, where the influence of the Roman heritage had produced a much more pronounced stratification of society. Largely in imitation of their Roman ancestors the military nobles had seized vast areas of land and had subjected the masses to their will. Here feudalism was more a product of a few powerful bullies whipping the poverty-stricken and fearful victims of a decadent empire into shape than it was the result of free men seeking protection through association with a powerful leader. The democratic ideology of the native tribes was secondary to the dictatorial ideology of Rome.

From such a background came William as the successful conqueror of England in 1066. The imposition of the Norman hierarchy of nobles and their system of centralized power upon the older feudalism of England produced a unique and enduring example of mature feudalism.

The guiding spirit of the new cultural entity was William the Conqueror himself. In a series of farsighted and remarkable acts he laid the framework of a system which continued to endure with astounding stability for five centuries. William was well aware of the precarious position of an exploiting group of military conquerors. In his attempt to secure his position, maximize his gains, and strengthen the economic unity of his possessions he not only created a unique pattern but also inaugurated some of the very forces which ultimately destroyed feudalism itself.

1. SEPARATION OF CHURCH AND STATE: We have already referred to the Church as a unifying force in feudalism. By the eleventh century the Church had set itself up and had become generally recognized in England and over most of Europe as a temporal as well as a spiritual power.

According to the theory of the churchmen, God created the earth and entrusted it to man for intelligent use. Since the primary function of the Church was the salvation of the soul, the higher clergy as represented by the Pope and his archbishops delegated the administration of earthly affairs to the lay rulers of feudalism—the kings and great lords. These were expected to extend the rights vested in them by the Church down through a hierarchy of lesser administrators until the lowest and meanest individual had the essentials of a good Christian life. As evidence of its power, the Church reserved the right to pass upon the competency of rulers. Even kings received their temporal powers and lands from the Church. Obviously, a feudal lord was subordinate to the Church under such a scheme of things.

Over the great mass of people there was a *double government* with dual jurisdiction. In matters connected with salvation the government of the Church with its courts and executive staff took preference, while in mundane matters the civil courts and administrators of the state took charge. Because of the great prestige which the Church enjoyed feudal lords were accustomed to abide by its laws and commands. However, William the Conqueror initiated steps which began a struggle between Church and state which ultimately resulted in the separation of the two.

William's first act was to renounce the claim of the Church as God's tenant-in-chief. He declared himself the sole alodial owner of all England and made allegiance to him a condition of landholding. By this bold act he subordinated the Church to the Crown and attempted to substitute the power of the Crown as the unifying force of the English system.

2. CHARTERED TOWNS: William was well aware that a successful administration and ample revenues depended upon gaining the support of the wealthier classes. Because of its insular position England carried on trade with the Continent even during the darkest and most chaotic days

of early feudalism. In its seaport towns lived a class of wealthy merchants and craftsmen whose services were eagerly sought by the wealthy clergy and nobility. To gain the support of this powerful class and to obtain the revenue which they afforded William chartered London in 1066. The charter was merely a grant by which the citizens of London were given immunity (freedom) from feudal services and dues in consideration of the payment of a large but fixed sum of wealth each year. The King gained revenue and the good will of a powerful class. The merchants gained freedom from military service and from numerous uncertain payments of feudal dues and fees. As we shall see, this act set a precedent which stimulated the growth of free towns and did much to undermine the very foundations of feudalism.

3. DUAL NOBILITY: To administrate his vast holdings William created an elaborate system of personal relationships and property obligations. Instead of destroying the old English nobility he placed his Norman nobles above them. First, he divided all England, except those parts held directly by the Church for religious and monastic purposes, among his 1,500 faithful Norman followers. These he gave the rank of barons. These in turn he required to subdivide the land among the native English nobility. Of course he required military support from all.

William foresaw the weakness of a ruler who delegated the power of raising a military force to a number of powerful nobles. Feudalism rested firmly upon military strength. Under its rules a baron might easily and in his own right summon his vassals to enlist in a war against the King himself. Of course he would thus break his oath of allegiance to the King but this was often done. To offset this danger, William required all vassals, both the great barons and the petty nobles below them, to assemble in Salisbury field in 1086 and there to swear allegiance directly to him. Thus a sacred oath prevented any baron from requiring his vassals to take up arms without the King's consent. By this means

William safeguarded his position but broke one of the established rules of the feudalistic game of war.

4. **ROYAL COURTS:** William did not overlook the administration of justice as a source of revenue and as a direct connection between the people and himself. Prior to his advent there had been two great legal systems. First came the canon law of the Church and the hierarchy of ecclesiastical courts, where it was administered. Second came a crude system of civil courts in manorial villages and in towns, where the everyday disputes of serfs or merchants could be settled and the revenue of the overlord enriched by fines. Now William instituted a new legal system which stood above all other civil law and even contested the jurisdiction of the Church. The *Curia Regis* consisted of the King's councilors sitting as a court. Its function was the administration of a new kind of law—the King's law—which superseded all civil laws. Furthermore, the King made certain grave offenses, such as murder, a crime against him and subjected the offenders to his judges. This system did much to lessen the power of his vassals, especially the great barons.

5. **DOMESDAY SURVEY:** Finally, William made the first economic survey in the history of feudalism. He was eager to obtain the maximum amount of taxes and service from his vast army of dependent barons and lords. To accomplish this end without impoverishing his nobility, and thus encouraging revolt, he made an astonishingly accurate survey of the nation's resources. A corps of agents rode through the land and by observation and questions made a complete tabulation of the kinds of land and equipment, as well as the size and required services of the dependent population under each noble. When the report was written up in 1086 it was called the Domesday Book, and became the basis for determining the amount of the economic surplus. From its pages historians have learned many of the most reliable facts concerning the nature and functioning of English feudalism.



### C. FEUDAL SUPERSTRUCTURE

The structure and functioning of the complex pattern called feudalism will be the subject of this and the next two chapters. To the cultural economist the significant aspects of a culture are not the life and activities of the relatively few who constitute the upper or controlling class but rather the daily behavior of the masses of society. But since the pattern of daily behavior of the underlying and exploited classes of feudalism was shaped and directed by the higher nobility and clergy it is essential that we first examine the three institutions through which these groups exercised the greatest power.

1. LAND TENURE refers to all the conditions under which land was held. To the higher nobility and clergy it was primarily a matter of exploitive rights given in return for military service and a few direct payments in money or goods. To the masses it was a matter of use and livelihood. The nobility held land in the form of fiefs, manors, and even towns. A *fief* was usually a vast territory, comprising many manors, which a baron held in return for military service to the King and the payment of a few specific aids and reliefs. Individual manors were usually held by members of the lesser nobility under the barons. Frequently a baron's fief was subdivided among a dozen or more vassals, who in turn further subdivided it among nobles of lesser rank and power. Towns were usually held by the King, by a baron, or by the Church, since they were centers of relatively great wealth and hence more able to pay heavy yearly rents.

2. VASSALAGE was a second control institution. In its simplest form it was the relation of a dependent freeman such as a knight or noble to his lord and acknowledged superior. A vassal swore homage (obedience) and fealty (loyalty) to his lord and agreed to serve in his army for a specified number of days each year. He was also required to assist in judicial functions at the request of his lord, to pay

certain reliefs and aids at regular intervals or on designated occasions, and to counsel his lord or bear witness at his court. These duties are not unlike the services which a free citizen of a modern democracy is required to render his overlord, the state. Today a citizen must swear allegiance to the flag, serve in the army at the command of the government, serve on the jury, pay taxes and fees, and appear as a witness in any court when subpoenaed.

The lord owed his vassal certain things such as protection against violence to his person or invasion of his lands, justice and redress in court, care of his widow and orphans, and even a livelihood. These obligations also find interesting survivals or parallels in the modern state. Among its recognized duties are protection against foreign invasion, the preservation of internal law and order, care of incompetents, and the maintenance of the basis of livelihood through wage legislation and direct relief.

3. THE CLASS HIERARCHY divided society into various groups and was the third institution which acted as a major social control. By recognizing hereditary distinctions, feudal society was stratified into self-perpetuating groups, which accepted the status quo as inevitable and proper. The practice of *primogeniture*, by which titles, social position, land, and possessions passed intact from the oldest son of one generation to the oldest son of the next generation enabled the higher brackets of society to preserve their relative positions over long periods of time. An increase in population merely augmented the dependent masses, which were forced to make such terms with their immediate superiors as the exigencies of the situation demanded.

The feudal system contained four distinct classes: the nobility, the clergy, the petty freemen, and the serfs. •

At the very apex of the class hierarchy stood William the Conqueror, overlord of all England. Below him stood the higher nobles, who sat in the Great Council and aided the King in the administration of his kingdom. Below them there were the lesser nobles, who were manorial overlords.

On the same level with the higher nobility stood the higher clergy, consisting of archbishops, bishops, and abbots. These were often members of the Great Council. They were usually large landholders. They administered the Church estates and the canon laws. Below them were the numerous members of the lesser clergy, consisting of priests and clerks who served in the capacity of lawyers, spiritual advisors, tithe collectors, and teachers. At the next level but belonging more with the lower classes were the numerous non-noble freemen. The vast majority of these were the citizens of chartered towns, many of whom served as artisans, merchants, and craftsmen. Others were stewards, bailiffs, or petty administrators on the manors of the great nobles. At the bottom of the system stood the class most vital to its maintenance. It consisted of the thousands upon thousands of unfree persons (serfs) whose lives were spent in producing food, shelter, clothing, and equipment on the manors of their overlords.

The feudal system is essentially a complex class structure built upon the primary institutions of vassalage and land tenure. This new cultural pattern spread over most of Europe and permeated every phase of man's endeavor. The glittering elegance of the control classes at the top was made possible by the activity of the underlying population. We have thus far dealt only with the superstructure of feudalism. It required a firm foundation in the agriculture of the rural sections, the handicrafts of the towns, and the commerce of the entire region. Let us now examine the institutions and typical behavior patterns of each of these aspects of feudalism. The focus of our attention will be western Europe with particular emphasis upon England, since that area was the source of diffusion for those feudal traits which are still present in modern American culture. Let us first analyze the manors which were the economic units of rural life organized for the production of all the essentials of existence.

## II. SOCIAL STRUCTURE OF THE MANOR

The structure of manorialism was built of three major parts: first an elaborate system of land tenure, second a complex system of social classes, and third a very effective set of social controls.

### A. LAND TENURE

The manorial system of land tenure can be most conveniently examined by analyzing the various kinds of land found on the manor and by observing the layout of the fields and the purposes for which each was used.

1. KINDS OF LAND on the manor depended upon the class or status of the persons holding them. Three types appeared on most manors.

*a.* DEMESNE LAND consisted of all those parts of a manor reserved exclusively for the use of the lord or his agents. Such land always included the choicest parts of a manor and usually accounted for nearly half the cleared land. In addition to the compact plots (closes), meadows, and strips of cultivated land into which the actual demesne land was divided, the lord possessed prior rights in the forest and in any other part of the manorial lands not actually assigned to tenants or to the Church.

*b.* THE GLEBE was that part of manorial land held by the Church or reserved for the use of its representative, the parish priest. On most manors the glebe consisted of a plot surrounding the Church and the parish house. Sometimes the priest and his associates had strips in the common fields but more often the plot around the Church provided ample ground for such crops as the clergy cared to raise. The priest and his associates were, of course, not dependent upon what they raised for their livelihood. Most of the tithes and fees for special services were paid by the manorial tenants in produce which they raised.

c. LAND IN VILLEINAGE included all manorial land used individually or collectively by the lord's tenants. For practical purposes it consisted of all cleared land on the manor not reserved for the use of the lord or the Church. From it the tenants derived their livelihood and for it they rendered the lord certain manual services.

2. THE PHYSICAL LAYOUT of manorial land depended primarily upon the use made of the land rather than by whom it was used.

a. COMMON FIELDS: Those portions of the manor lands which were to be cultivated by seeding them with grain crops were divided into three great open fields on the typical English manor. They were described as "open fields" owing to the fact that they were not surrounded by hedges or any other permanent type of enclosure. Their boundaries were simply marked out upon the surface of the soil. On some manors the arable land was divided into only two great open fields instead of three. This was usually the case where the soil was less fertile, and it is, therefore, not surprising to learn that in the great fertile plain of the southeastern portion of the island the three-field system was the dominant one. Inasmuch as one field was always left idle it is obvious that the three-field system brought two-thirds of the available land into cultivation at any one time and was therefore a more intensive method of cultivation than the two-field system, which brought only one-half of the land into cultivation at any one time. It was, of course, only the more fertile soil that could support the more intensive methods of cultivation.

Each of the great open fields was subdivided into flats, and each of these was subdivided into long narrow strips about four rods wide and forty rods long, containing approximately an acre. There were frequently strips of one-half that size and occasionally some called "roods," containing only one-fourth of an acre. Each strip was separated from its neighbors by a "balk," which often consisted of an unploughed strip of turf or merely two furrows

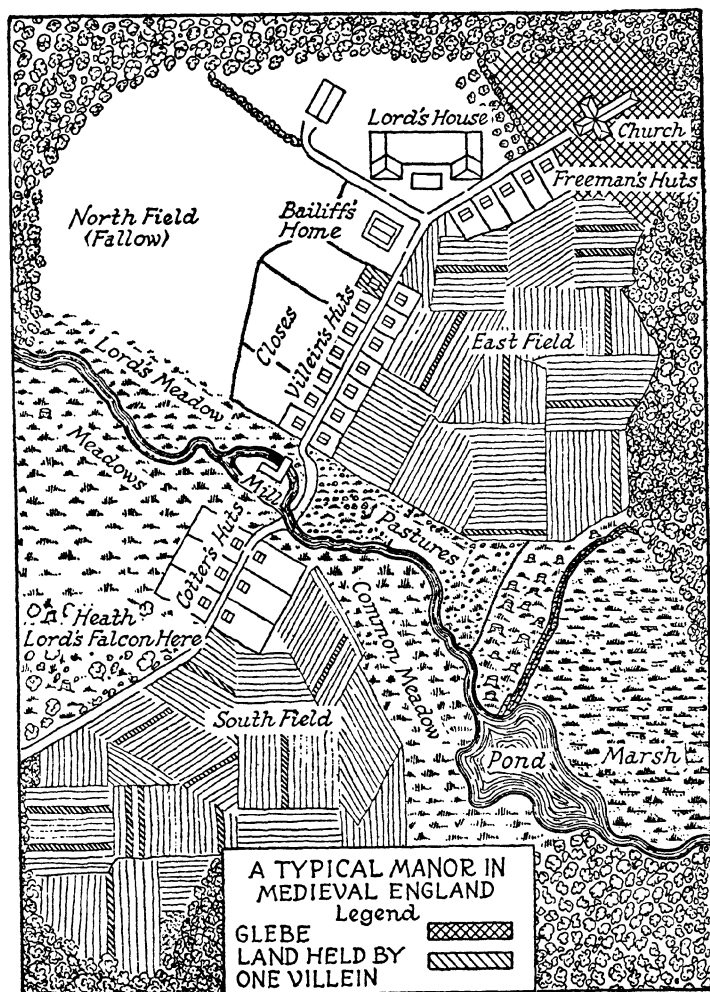


FIG. 7.—THE MEDIEVAL MANOR

The manor was a world unto itself. Except for the lord, the inhabitants produced practically everything they used within its limits. Although villeins and serfs worked long hours they enjoyed a degree of economic security unknown to the modern industrial worker.

ploughed together to form a ridge. These balks provided rude footpaths between the strips. Simple as this method was it readily served to distinguish one strip from its neighbors for, in ploughing, the furrows were usually turned toward the center of each strip, thus giving a different appearance to their adjacent sides. Each strip was held by a dependent tenant, with the exception of the strips which formed part of the lord's demesne, and they were in no way distinguishable from other strips. Every villein possessed a number of strips upon which he planted grain each spring and from which he harvested a crop each fall.

On some early manors the strips were redistributed among the villeins each season. This practice tended to insure a rough sort of economic justice since no villein could have permanent possession of the best strips, season after season. When this practice gradually died out and it became customary for each villein to hold the same strips year after year—some equality in landholding was still preserved since each villein held some strips in the best areas and some in the poorer sections of the manor.

b. COMMON PASTURE: The pasture lands of the manor were, like the arable fields, open on all sides. The cattle were prevented from straying, not by permanent fences, but by herders whose duty it was to watch and tend them and to keep wild animals away. Temporary fences were sometimes set up around the arable fields in order to assist the herders in keeping the cattle out of the growing crops, but the pastures were not fenced, hedged, or walled until after the enclosure movement.

Each tenant had the right to share in the use of this common pasture and thus all shared alike. When the season was good and the grass abundant all the cattle of the village prospered but when the season was poor all felt the hardship. Since there were no individual property rights in grazing land no owner could lay claim to the best watered and greenest grass lands and exclude the cattle of the less

fortunate owners from it. In order to make sure that no villein used more than his fair proportion the number of animals which one villein could send to the common pasture was limited, or, as they expressed it, the grazing rights were "stinted."

*c. MEADOW:* Upon the meadowland grew the fodder for the support of domesticated cattle during the winter. The area of such meadowlands was strictly limited and often proved insufficient to support the animals of the manor throughout the winter. Many modern fodder and hay crops were unknown. They attempted to solve the fodder problem in two principal ways. First, they killed a large number of their domesticated animals every fall, and salted the meat for winter use. Each family slaughtered, butchered, and preserved its own meat. Only a sufficient number of animals were kept for breeding purposes. Second, they sought to supplement the natural hay by the production of other crops, such as beans and peas.

*d. CLOSES:* Scattered over the manor were many plots of ground not divided into strips. Usually these fields were surrounded by walls or hedges to separate them distinctly from surrounding land and from each other. Any enclosed area of this type was known as a close. The most conspicuous one on a manor was that surrounding the lord's home, the manor house. Similar closes surrounded the Church, the home of the bailiff, and, sometimes, the homes of the wealthier freemen. Usually there were certain parts of the meadowland separated by hedges into closes. Often one of these served as the lord's meadow while the others were rented to certain favored tenants. Finally, a few choice closes were often adjacent to one of the common fields. These were held by the wealthier freemen in return for their services as knights in the army of the lord. In the later feudal period closes increased in number and were rented to any tenant for a payment called a "ferm."

*e. WOODLAND OR FOREST:* In early manorial times England was heavily wooded. Each manor was surrounded by a



dense forest. This situation had definite disadvantages. The wild animals of the forest were frequently a menace to the security of domesticated animals. The expansion of the fields of the manor could be accomplished only at the expense of great toil in clearing the forest land of its native growth. The forest enabled bands of hostile warriors and knights to approach the manor without being seen. The density of the forest made travel and trade between manors difficult, since what routes there were usually consisted simply of footpaths or pack trails, along which a carriage or wagon could not be driven.

On the other hand, the common forest contributed greatly to the life of the manor. It furnished fuel for cooking and for heating. Sometimes, when firewood was scarce, many a villein went into the lord's private woods and broke dead wood from the standing timber with a shepherd's crook, or a pole, on the end of which was fastened a hook. Today when a person is accused of getting something "by hook or crook" the intention is to cast doubt upon the legality or ethics of the procedure. Tenants also had the right of *pannage*. This was the right to permit hogs and sometimes even cattle to forage for themselves, but since the forest was the habitat of wild animals it was rather dangerous grazing land. This same feature made it a most excellent plot upon which the lord and his retainers could indulge in the ancient art of hunting, which was no longer of importance as a means of securing livelihood but merely a sport.

*f. WASTELAND:* There were frequently portions of the manor lands such as hills, ravines, and marshes not suitable for cultivation. The lord and his retainers frequently used suitable portions of the waste land for their sports, such as falconing. Sometimes there were plots in the wasteland which could have been cultivated but were not required by the number of persons then inhabiting the manor. They were permitted to lie idle, since the motive of manorial life was production for use, not production for sale.

## B. CLASSES

Land tenure and the uses to which each type of land was put gave the manor a distinct physical pattern. For similar reasons it had a clear-cut social pattern. Classes and the duties which they imposed upon their members divided the inhabitants of the manor into a hierarchy of inter-related groups.

1. THE NOBILITY consisted of those few widely scattered but powerful individuals who held the land and subjected the population of England to their own exploitative purposes. After 1066 William the Conqueror placed himself and his victorious military followers at the very head of this class. From the Domesday Survey (1086) we learn that there were about 1,500 tenants-in-chief, made up very largely of Norman barons. The 8,000 tenants-in-mesne consisted for the most part of the English nobles who had been made subordinate to the Normans.

It was not unusual to find men who held ten or a dozen manors, and there were some lords who held hundreds. Odo of Bayeux held 439, Alan of Brittany held 442, and Robert of Mortain boasted 793. Obviously when manors were held in such numbers there could be no direct personal contact between the lord and the manorial population. The relationship was rather one of exploitation by an absentee landlord.

The greatest individual landholder of all was the King himself. More than 1,400 of the 9,250 manors listed in the Domesday Survey were held directly by the King. In addition he claimed title to all the land in England and in a strict sense no person except the King actually owned any land, since all landholders were the King's tenants, either directly or indirectly, and had certain obligations to perform in return for their landholdings.

The power of the nobility rested primarily upon landholding. Since the Church was one of the largest landholders in feudal England its officers enjoyed the social distinction and

economic power associated with the nobility. Their relative power can be judged from the relative amount of land held. In 1086 the King held two-tenths, the Church three-tenths, and the barons five-tenths of the land. The higher clergy discharged all the functions of landlords but often tried to escape the attending military duties imposed by the King upon such landlords.

On every manor the person who enjoyed the highest status was the *lord*. To him every other person on the manor, including even the freemen, owed some kind of an obligation. He held the lands of the manor because of a grant from some higher noble or directly from the King. He himself was a noble belonging either to the higher Norman nobility or to the lesser English nobility. Lords were required to render military service to the King, each being responsible for providing and maintaining a specified number of fully equipped fighting men in the field for a given length of time. They were generally expected to lead this group in person. The amount of a lord's responsibility varied with the extent of his feudal holdings.

He was also called upon to pay feudal dues either in kind or in money. If he was one of the King's tenants-in-chief the military service and the dues were paid directly to the King. But if he was a member of the lesser nobility and the possessor of only a small fief his obligations would be paid to the King indirectly by serving an intermediate overlord.

In addition to these feudal obligations it was the lord's manorial duty to protect his tenants. For this purpose he kept a band of retainers who were skilled in the art of fighting, and provided them with food, clothing, shelter, and equipment. It was also his duty and privilege to administer justice on the manor and for this purpose he held the manorial court. His duties as well as his landholdings and social status made the lord the most outstanding personage of the manor.

2. **FREEMEN:** According to the Domesday Book about one-eighth of the population of England belonged to the

class of freemen. Although they recognized personal ties of allegiance to an overlord they occupied a relatively high status, not being bound to the land as villeins were. All nobles belonged to this class and their holdings are referred to as fiefs, a term usually indicating the possession of one or more manors. An ordinary freeman, living as a tenant on a manor, had less impressive holdings. He ordinarily possessed a hut located on a small plot of land and in addition a number of strips in the common arable fields. He sometimes enjoyed the possession of a close.

In return for his holdings the freeman owed certain obligations to his overlord. First, he was required to render homage and to pledge fealty which means simply that he acknowledged the lord of the manor as his superior and promised to look after his interests. Second, he was required to make annual payments, either in goods or in money, for the land which he tilled. Third, he was obliged to render certain feudal *aids*. (1) He was obligated to assist in meeting the expense of making his lord's eldest son a knight. (2) He must help provide a suitable marriage portion for the lord's daughter. (3) And, if his lord chanced to be captured he must help raise the ransom demanded for his release. In addition to these aids the freeman was required to pay a fee, often called *relief*, when he inherited his estate from his father. Freemen like villeins, were subject to the "heriot" tax, a fee collected from the property of a deceased tenant. It frequently consisted of the best animal possessed by the deceased, just as the relief frequently called for the payment in one sum of the equivalent of a year's normal payments. Some contend that these fees constitute the origins of our modern land and inheritance taxes. Freemen were also subject to military service but, unlike noble freemen, fought on foot with no special equipment save bows, arrows, and lances.

In case a freeman died and left a daughter not yet of age the lord became her guardian. This was often a very lucrative privilege since it included the right to determine

the girl's husband. Suitors usually offered a "consideration" to the guardian for his consent to the match. In many cases, the highest bidder won regardless of the girl's wishes or affections.

Sometimes freemen held minor jobs such as superintending certain manorial activities. In the late manorial period the whole of the demesne was allotted to a freeman for the payment of a "ferm." He was then known as a "fermar" and it is believed that our word "farmer" comes from this early practice. Although the freemen occupied a somewhat higher status than the villeins they were numerically less important than their more humble brothers.

3. VILLEINS: The most important single group on the manor as well as the largest class of the English population was composed of villeins. These were of three grades. The most numerous were known as virgators. Those who held only half as much land were called bovators. On some manors there were quarter-virgators who held only a "noke," one-fourth the usual amount of land ascribed to a virgator.

The villein occupied a subordinate position on the manor and had a semi-free status. He was not only bound to the lord of the manor and required to render the customary services, but he was also bound to the soil, which meant that he must remain on the manor. In case the manor changed hands the villeins stayed with the land and became the vassals of the new lord. They were merely the holders of personal property and the lord could seize even that, subject only to the custom of the manor. The status of the villein is clearly shown by the fact that he had to buy the permission (with a fee known as *merchet*) for his daughter to marry.

The typical holding of a villein was a *virgate*, which usually consisted of about thirty acres of arable land. The number of acres varied from manor to manor depending upon local custom, the fertility of the soil, and whether the two-field or three-field system was in use. On manors having unusually large virgates the size did not ordinarily exceed

fifty or sixty acres and on manors having exceptionally small virgates the size was not usually less than eighteen or twenty acres. In spite of this variation on different manors, the virgates on a particular manor were all of approximately equal size.

No villein held all his land in a compact plot, as the modern farmer does today. He had, instead, a considerable number of long narrow plots of land scattered in each of the arable fields and separated from neighboring strips by balks. The strips were ordinarily about forty rods long by four rods wide (an acre in area). In addition to strips scattered through the open fields, each villein possessed a hut situated on a small plot of ground in the manorial village.

The villein also enjoyed a number of very important privileges. The most important of these was his right to pasture animals in the common pasture. Others were the possession of a plot of meadowland from which hay was cut for winter use and the privilege of using the wasteland and woodland.

The services and payments required from villeins were numerous and onerous. The amount required was fixed by the custom of the manor but the kind of service required was determined by the will of the lord. This was well illustrated by the *week-work*. The number of days of service rendered in each week was fixed by the custom of each particular manor but the kind of work to be done on any given day was subject to determination by the lord or his representative. In addition to *week-work* the villein was required to contribute *boon-work*. This consisted of working on the lord's demesne during the planting season or at harvest time. Even if his own crop was ripe and ready to harvest he had no choice but to leave this important work to his wife and older children until he had discharged his duty to the lord. However, the lord provided food for the laborers during this season. The custom of the manor determined both the amount and the kind of food to be provided.

In addition to the normal types of agricultural work on the demesne, such as week-work and boon-work, the villein was required to do carrying and hauling for the lord, to make payments in kind from his flocks and garden, and to render numerous services or payments on special occasions. More than half of a villein's working time was placed at the lord's disposal.

One may well wonder what the mental attitude of the villein was concerning his lot. Was he satisfied with conditions or did he harbor a secret grudge? Did he long to better his condition and hope to achieve that result? For the great majority, at least, the powerful forces of custom were sufficient to prevent many outward signs of their dissatisfaction.

However, there were certain methods by which eventually, considerable numbers of villeins gained their freedom. The most important was the *commutation of services*, a process whereby money payments came to take the place of goods and services required of a villein. After the appearance of chartered towns, a second method of gaining freedom was open to the villein. If he could *escape to a free town* and live there for a year and a day without being detected and returned to his manor he became a free citizen of the town. A third method was to *purchase freedom* from the lord. Very few could raise the required price. The Church offered a fourth avenue of escape. Any person who joined the *clergy*, automatically acquired a status in the clerical hierarchy which was essentially extra-feudal. Finally, every *disturbance* of the customary order, such as plagues or crusades, resulted in freeing some villeins.

4. COTTARS: There are two principal explanations for the appearance of the cottar class. One is that they were villeins who had lost their holdings in the open fields through breaches of the custom, through exploitation by the lord, or through incompetency. Others believe that the manorial population sometimes increased faster than arable fields and cultivation could be expanded. Under such circum-

stances a group of unwanted and destitute individuals appeared and were permitted to build huts and eke out an existence as best they might along the borders.

Possessing little land and less livestock they were forced to work for their more fortunate neighbors. When labor was scarce and the lord needed work done he could and did turn to these marginal workers for labor. At first they were not paid in money but were given a privilege or goods in place of wages. These subvilleins thus constituted the source of the modern English agricultural wage laborers.

5. MISCELLANEOUS PERSONS: The *officials* of the manor were not a separate class but merely freemen, villeins and cottars serving in the capacity of superintendents, foremen, and petty caretakers.

Only a few *artisans* were to be found upon the manor. One of these was the miller, who operated the lord's grist mill. Another was the blacksmith, whose chief work was making and repairing ploughs and who knew enough about metalwork to keep in repair the small number of metal tools and implements in general use.

The *clergy* was represented on the manor by either a resident or an itinerant priest, who found his status in the ecclesiastical rather than in the manorial hierarchy. A resident priest frequently possessed holdings similar to those of a villein and although his services were primarily of a spiritual nature he also ministered to their physical needs when they were hungry or ill and was often seen working in his fields like any ordinary tenant.

Slaves had practically disappeared from the manor by the end of the twelfth century but many manorial lords kept servants whom they supported directly, providing them with food, clothing, and shelter. Being thus provided for they had no need of agricultural holdings.

## C. SOCIAL CONTROLS

1. CUSTOM AND TRADITION: The isolation and self-sufficiency of the manor made it dependent to a large degree



upon the social heritage of the immediate group. It produced attitudes which favored only tried and tested methods, thus leaving little scope for individualism in the rigid confines of a gossip group where departure from the accepted norms of social behavior quickly brought group censorship. In addition the cooperative nature of farming, the individual poverty, and the scarcity of equipment required methods acceptable to the entire group. The oral or "low" tradition furnished the chief connection with the past and made custom and tradition the leading social controls.

Although practically all phases of life were subject to this emphasis upon the past there were certain realms in which the power of custom and tradition were felt with particular force. In agriculture, in land tenure, and in religion, changes could be achieved only against the severest opposition. In fact religious forms and observances such as rituals and sacraments have resisted change more successfully than have social arrangements, political forms, or modes of economic organization. The Church, an institutionalized form of religion, is one of the most conservative of social institutions.

Personal relations also assumed very rigid forms and adhered to that which was customary and traditional with exceptional tenacity. These forms included such things as occupations, the class structure of society, court processes, recreational types, and the like.

Vinogradoff sums it up very nicely when he says: "The life of the villein is chiefly dependent on custom, which is the great characteristic of medieval relations and which stands in sharp contrast with slavery on the one hand and freedom on the other."

2. ATTITUDES: The dominant attitudes held by most people during the manorial period were closely related to custom and tradition. If *conservatism* be defined as that attitude which favors the maintenance of existing institutions or views and opposes change and innovation in the

interest of maintaining the status quo then it is the direct outgrowth of an emphasis upon tradition and an attachment to custom.

*Provincialism*, which frequently accompanies conservatism, is a common attitude in which a peculiar attachment for local ways and institutions is evident. It usually results from the isolation of a group and is characterized by ignorance and a limited outlook. Because of extremely limited contacts with other groups, internal peculiarities develop and a group thinks of its own idiosyncrasies as normal and of its own peculiar ways as best. This attitude was prevalent in most manorial communities.

In such circumstances it was easy for the old attitude of *dual morality* to survive. This attitude found frequent and violent expression in the military encounters of the local feudal lords and their retainers. Of course, within the manorial group the cooperative nature of the three-field agricultural system tended to produce a feeling of group friendliness and solidarity. But all those who were not members of the in-group were regarded with suspicion if not open hostility. Those of the out-group showed a similar attitude toward strangers.

Economic circumstances were directly responsible for the fourth dominant attitude. *Orderliness* was a result of the unvarying routine which the agricultural system required and arbitrarily imposed upon all those associated with it. The seasons, like the tides, wait for no man. The standardized routine associated with the crop cycle tended to promote an attitude of orderliness which permeated other aspects of life.

3. **TECHNIQUES AND TOOLS:** Bearing in mind that anything which affects or conditions the type of behavior may be correctly regarded as a social control, it at once becomes apparent that both the known techniques and the available technical equipment are informal and unnoticed social controls in any culture. The type of tool used by the manorial villein conditioned his everyday behavior just as certainly

as modern factories and steel mills affect the lives of the men who labor in them. The mills mold men as well as metal. Only brief mention will be made of these manorial techniques and tools.

The fallow-field system was a technique whereby fields rather than crops were rotated. Planting was frequently done by "broadcasting." The sower carried a bag of seed and scattered it broadcast over the fields by hand. Planting was difficult and considerable loss of seed was inevitable. Reaping and threshing were also laborious hand processes requiring hard work and a maximum of labor time in relation to the yield.

The strip system of cultivating the three open fields possessed certain definite advantages. In the first place, every tenant was assured of some economic security (something which is entirely too rare in the economic society of the twentieth century). In the second place, the cultivation of the entire field was assured even during the illness of a particular individual. The in-group morality with its spirit of neighborliness and cooperation took care of that. In the third place, excessive negligence was prevented. The group permitted no individual to let weeds grow up on his strip for they would spread too easily to neighboring strips. In the fourth place, the feeling of equality, promoted by the "rights in common," was particularly desirable as a factor promoting both the welfare of the individual and that of the group.

A comparison of the three-field strip system of cultivation with modern agricultural methodology reveals many manorial disadvantages. First, custom was the dominant force, controlling the methods and techniques. This tended to encourage the static nature of the agricultural art. Second, the proximity of the strips to each other and the fact that they were all ploughed in rotation discouraged individual initiative and efficiency. Third, the shape and size of the strips made effective soil utilization difficult. Not only did the large number of strips mean a correspondingly large num-

ber of balks and consequent waste of soil, but the practice of not cultivating the corners of the fields was another reason for the ineffective soil utilization. Indeed this was particularly bad with the open-field strip system, for, instead of having one thirty-acre field with only four corners to cultivate as the modern farmer has, the manorial villein had thirty, one-acre fields to cultivate with four corners each or one hundred and twenty corners. Finally, there was considerable loss of time and effort involved in transferring men, animals, and equipment from one strip to another.

The agricultural tools of the manorial workman were but little better than those of his predecessor in the Temple Town or, indeed, those of the Neolithic cultivators. Simple hand tools were still the only available implements. Although fabrication from metal rather than stone was a considerable improvement there had been only slight change in form.

The techniques and tools in the domestic arts and crafts, like those in agriculture, were very simple and crude. Among the principal techniques were those associated with the performance of household duties such as sewing, cooking, churning, and cheese making. A much larger number of useful economic functions were performed in the home than is now the case in the modern efficiency apartment with its many available supplementary services ranging all the way from the commercial laundry to the delicatessen. Closely associated with the household arts was the textile industry. Indeed carding, spinning, and weaving were ordinarily carried on in the home or at least in a shed attached to it. The fabrication of textiles remained as an important home industry until the Industrial Revolution removed it to the factory.

The building trade did not ordinarily call for specialized professional skill, since it was principally concerned with the building of the simple thatched huts of the villeins, which had neither windows nor floor. The erection of these huts, like the "barn raisings" of frontier days in the United

States, was the occasion for cooperative effort. In the late manorial period, however, the construction of elaborate stone manor houses and castles required a high order of stone masonry as well as the skill of professional builders.

The technique of metalworking was essential to manorial life. Since mining and smelting were not practical on most manors metal was secured by trade with producing regions. There was usually one man on the manor capable of fashioning simple articles from metal. But the manor was not a center for skilled labor and most of the crafts were located in the towns.

As already noted, the tools used in the domestic arts and crafts were hand tools. There was however, one notable exception, the water-powered grist mill, located on the stream and owned by the lord, who required all residents to have their grain ground in it. Perhaps the mill is scarcely to be classified as pertaining to the domestic arts and crafts, but there is plenty of evidence to indicate that hand mills would have been employed in the homes of the villeins and freemen had it not been for the monopoly exercised by the lord's mill. Indeed such hand mills were frequently confiscated by the lord in order to prevent tenants from avoiding the monopoly.

4. ADMINISTRATIVE STAFF: One of the most obvious devices for the exercise of social control on the manor was the administrative staff. It consisted of the steward, the bailiff, the reeve, and certain miscellaneous petty officials.

a. THE STEWARD, or seneschal as he was sometimes called, was the highest officer of the manor, second only to the lord himself. Not every manor had a steward, since he was the personal representative of the lord and, therefore, spent his time traveling from one manor to another, if his lord possessed several manors, and enjoyed an income which permitted him to live in town. The steward's functions were to keep the accounts, supervise the administrative officers, hold court, and represent the lord in all matters. Of course

the lord did make occasional trips to his various manors and on such occasions he presided at the court.

*b. THE BAILIFF:* Each manor recognized as its highest resident official a bailiff, or beadle as he was sometimes called, who was the lord's representative and who was responsible for the cultivation of the demesne. If the lord was of the petty nobility and possessed only one manor he would probably choose to reside on it rather than in town. In such a case no steward was necessary and the lord managed his affairs with the aid of the bailiff, to whom he entrusted the actual labor of administration. It was the bailiff's function to collect the rents and to see that the villeins' obligatory services were actually rendered. In addition he had to account for all receipts and expenditures. When occasion arose he acted as public prosecutor in the manorial court.

*c. REEVE:* The villeins as well as the lord were represented on the administrative staff of the manor, but in a very limited fashion. The reeve, or provost as he was sometimes called, was chosen to represent the villeins but his selection had to have the approval of the lord, to whom he was responsible. In addition to the general assistance which he gave the bailiff in the administration of the manor he had one particular function to perform. This was the allotment of services due from the villeins. Each villein was bound to render a certain number of days of service each week but the particular task to be accomplished by each was left to the determination of the lord, who in turn entrusted this task to the reeve. It was to him that villeins brought their disputes for settlement and it was through him that grievances were brought to the attention of the lord or his representative.

*d. PETTY OFFICIALS:* There were also on the manor a number of petty officials with special functions to perform. For example the shepherd, the swineherd, and the cowherd were responsible for watching and caring for their respective charges while they were grazing.

5. MANORIAL COURTS: The manorial judicial system is sometimes described as though it consisted of three separate courts; the court baron, the court customary, and the court leet. However, in practice there seems usually to have been but one court, which met periodically to transact whatever business required attention. It probably was called by one or another of its three names depending upon the kind of business brought before it. The *Court Baron* heard cases between freemen or between a freeman and an unfree tenant. It had jurisdiction over matters concerning the management of the manor such as the choice of officials, the transfer of tenures, and the collection of aids and reliefs. The *Court Customary* dealt with cases involving villeins and cottars, particularly those dealing with the custom of the manor. It decided disputes concerning the transfer of rights and holdings, the inheritance of virgates, and the obligations of one tenant to another. The *Court Leet* heard cases of both freemen and villeins when they involved some petty crime such as theft, assault and battery, or escape from the manor.

a. IN ORGANIZATION the manorial court was very simple. Its presiding officer was the lord or his steward. The public prosecutor was one of the lord's representatives, usually the bailiff. The body of the court consisted of all the tenants of the manor. Attendance was required and failure to be present was punished by a fine. The ordeal was still sometimes resorted to as a method of settling disputed points. Such a practice indicates the crudity of the court procedure and bears a resemblance to the practice of trial by combat in use among the nobility. In either case God was presumed to protect the innocent party, thus assuring justice and providing infallibility.

b. THE SIGNIFICANCE of the court system is twofold. The manorial courts constituted the principal formal social control device of the medieval period. But they are of even greater significance today as a source of knowledge concerning medieval people. A composite picture of their

customs and institutions, their social structure, and their cultural pattern can be pieced together from the fragmentary data contained in the records of the court proceedings.

Many modern legal forms and practices can be traced back to the organization and procedure in the manorial courts. The court baron and court customary were held under the lord or steward, who served merely as the presiding officer. The body of tenants served as a jury. In the court leet, however, the steward was judge. With the decay of the manorial system the manorial courts also declined and the *judge and jury system* was handed down to modern times through the social heritage.

A jury of "one's peers" is a meaningless survival of the days when one was tried before his neighbors who were economically, socially, and religiously his peers. Today one's neighbors, to say nothing of the members of the panel from which a jury is selected, are not his equals in any of the above senses. They are his peers only on the questionable democratic assumption that all men are free and equal.

At modern weddings "let him speak now or forever hold his peace" is a survival of days when witnesses to a wedding were the lifelong neighbors of the parties and well qualified to speak. Similarly in manorial court, when the son of a villein was to inherit his father's virgate, the whole assembled company of tenants were given an opportunity to object. For instance, a younger son could claim the virgate on the basis of his elder brother's being an illegitimate child. When this happened the case passed from the jurisdiction of the court customary to the ecclesiastical court, since the sacrament of marriage was involved.

During the reign of John (1199-1216) the Church abolished the ordeal. It then became customary to select a jury to determine disputed points. The members of this petty jury were presumed to be persons acquainted with the case and therefore capable of arriving at a decision. They were expected unanimously to affirm or reject the accusations brought by the grand jury. In communities of a few



score persons this system doubtless worked fairly well but in larger communities, where each man knew his neighbor's business less thoroughly, it became increasingly difficult to get decisions. The practice then grew up for witnesses to be summoned to appear before the jury and present their knowledge of the facts. This was the origin of our modern *grand jury*.

Our modern legal system also owes a heavy debt to the customary practices of the medieval manor, for the *common law* was merely a common-sense interpretation of manorial custom. During the reign of Henry II, the judges handed down decisions so clear, so consistent, and so well recorded that they became the basis of subsequent decisions. These precedents served as the foundation for what is called the common law, which in turn became the basis of modern law in English-speaking countries.

6. THE CHURCH: The vast and powerful organization of the medieval Church, with its sacred and secular powers and its ecclesiastical courts, made a most effective instrument for molding the attitudes of people as well as for controlling their behavior. The common man lived continually under the spell of its dictates and in the shadow of its might. Even kings were compelled to bend their royal wills to the authority of the Church.

### III. THE SOCIAL PROCESS

Considerable knowledge of the social life and living conditions of the day may be gained through a study of the homes in which people lived, the food they ate, and the clothes they wore.

#### A. LIVING CONDITIONS

1. HOMES: The manorial villeins lived in *huts* which were extremely crude, having neither floors nor windows. Primitive man had made his bed upon the ground beneath the rocky protection of a limestone cliff or under the stretched

skins of his humble tent, and although the medieval villein did not improve upon the floor he altered the customary shelter in other ways. Its walls were now made of poles wattled with clay and sometimes they were entirely of wood. The roof was thatched with reeds or straw. No chimney graced such a dwelling but sometimes a hole was left to permit the escape of smoke from a cook fire. Baking was not done here but was taken to the lord's oven, which was specially constructed for the purpose. As the centuries passed the homes of the people were gradually improved in materials, design, structure, and furnishings. Wood construction gave way to stone in some of the better houses but not until the fifteenth century was brick used and even then it was a more costly type of construction. Not until modern times did the average man enjoy the advantages of adjustable glass windowpanes which make it possible to have both light and heat at the same time in the winter as well as fresh air and light in the summer. Even in the castles of the Norman period the windows were simply openings in the thick stone walls. These were covered with tapestries during the winter in an effort to keep out the cold.

In the villein's hut the articles of furniture were home-made, few in number, and extremely crude. Agricultural tools and cooking utensils, including a bacon rack, were the most prominent articles in the house. Nothing resembling a modern bed was known. The villein slept in his clothes upon some straw and rags placed upon the floor. This straw pallet could be taken up and stored in small space during the day.

In some of the huts there was a crude attic or upper story made of poles and reached by a ladder. This space could be used for storage or, in case the family was large, for additional sleeping room. Owing to the small size of the hut economy of space was necessary and this probably led to the use of a "table" made of boards laid upon separate supports so that the whole could be stored against the wall when its space was needed for some other purpose. The function of modern chairs was discharged by homemade benches.

The village, which consisted of these huts, was both small and dirty. No modern sewage disposal systems were available and near each hut was a "mixin"—that is, a pile of manure and refuse of all sorts which Gibbins describes as making the village street "unsavory, unsightly, and unwholesome." The water supply came from a well located near the huts. Considering these unsanitary conditions it is not surprising that plagues were frequent and deadly. Another factor contributing to medieval diseases was the poorly balanced diet, with its excessive use of salted meats and absence of fresh vegetables in winter.

The *manor house* of the early centuries was very crude in comparison with the structures which appeared later. It was usually constructed of wood and frequently had only a dirt floor. Early manor houses usually consisted of one large rectangular hall which provided living quarters for the lord's retainers. Meals were cooked at a large fireplace equipped with a chimney to carry the smoke from the hall. The banquet board, as its name implies, consisted simply of oak boards laid on movable supports, which may best be described to the modern reader as sawhorses. At the sides of the "board" were placed benches upon which to sit while eating. This arrangement has merit in the type of environment for which it was designed, for after a meal the boards, the sawhorses, and the benches could be quickly stored along the sides of the hall, thus leaving ample room for the activities of the day.

In addition to the normal routine activities carried on in the manor house, its hall served for the sittings of the manorial courts. On other occasions the solemnity of court proceedings gave way to the feasting, dancing, singing, and festive activities with which military victories, holidays, weddings, and special occasions were celebrated.

The manor house, like the huts of the villeins and cottars, became more elaborate and more habitable as the centuries passed. A wooden floor was added and the hall was supplemented with smaller rooms devoted to special purposes.

With the coming of the Normans, building with stone instead of wood increased and the structure was adapted more closely to their military needs. Finally the *castle* appeared as the ultimate in baronial dwellings. This was a type of structure so designed that it could be most easily defended. Its stone masonry carried the entire weight of the building and in most cases was so thick that it could successfully withstand the most vicious assaults with a battering ram. The shape of the walls was so arranged that a view of each could be had from some other part of the building thus making it possible for archers in one part of the building to command the approach and base of another wall. Towers, abutments, and ramparts aided the general scheme. The structure was generally placed on a hill or in some other commanding position. The whole was frequently surrounded by a stone wall having only one opening and this was protected by an iron grating or portcullis. Sometimes this wall was further protected by a deep ditch, which if the topography permitted was filled with water. Such a construction made it possible for a whole community to seek protection within the walls. The size of the structure frequently permitted the storage of enough food and grain to enable the occupants to withstand a protracted siege.

Only the great nobles could afford to construct or to maintain such a building, and the student must bear in mind that the castle was never typical of the average manor during the twelfth or thirteenth centuries, but was a special feature of certain manors in the late feudal period (especially after the Crusades).

With the decline of feudalism the power of the feudal barons was finally replaced by the sovereign power of the central government and peace within the country was assured. No longer did men need to live in somber fortresses, and the stone castle was replaced by sturdily constructed mansions of oak in which living was far more pleasant. The wealthy introduced carpets to take the place of bare floors strewn with rushes; tapestries decorated the

walls and wooden and pewter dishes were replaced with silver plate. Thus the evolution of building types passed from wattled huts made of willow poles through the massive stone castles and back to oak-beamed mansions.

There were some, however, who looked back to the more rigorous "good old days" with longing. For example, one writer of the later period says: "When our houses were built of willow, then we had oaken men; but, now that our houses are made of oak, our men have not only become willow, but many are altogether of straw, which is a sore affliction."

2. **FOOD:** The diet to which the persons on the manor were accustomed was simple and monotonous. There were three principal sources of nourishment to be drawn upon and these undoubtedly determined the menu. First there was the *grain* which grew in the open fields. Rye and wheat were generally regarded as the bread crops, rye predominating in the early manorial period, especially on the poorer lands. It was this grain which was taken to the lord's mill and ground in order to make the bread which served as the main item in the peasant diet. The barley was frequently turned into a drink—a sort of home brew resembling ale. Considerable quantities of this were apparently consumed, at least by the upper classes. The oats, peas, and beans sometimes grown in the open fields were usually intended as food for the domesticated animals. It is clear that the open fields which produced wheat, rye, and barley were the principal source from which the people secured sustenance. They provided both the staff of life and a drink to increase its palatability.

The second source of the food was to be found in the plots (messuages) surrounding each hut. Here fruit and berries and a few garden crops were grown. The *garden crops* consisted almost exclusively of the leafy-type vegetables, which grow above the ground, and seed-type vegetables such as peas and beans. Root crops such as potatoes, carrots, and turnips were noticeably absent. All the modern "creations" of the horticulturalists' art were, of course,

unknown. Corn (maize) did not come into use in Europe until centuries later, when it was introduced from America.

*Domesticated animals* and their products provided the third source of food. Of these the hog took first place in the diet, for this animal was exceptionally able to look out for itself under adverse conditions. Salt pork undoubtedly found a very large place in the winter diet of the medieval villein. The fall butcherings of the excess cattle also provided a large source of meat at that season and any beef not then consumed was salted for winter use. Milk, butter, and cheese were supplementary products which added a much needed variety to the menu but it is doubtful whether they were consumed in any considerable quantities. In addition to domesticated animals it is probable that the customary routine of foods was occasionally broken by the use of wild game. However, the villein was excluded from the royal forest and from the hunting preserves of the lord and probably had but little time to indulge in the sport in any event. Wild game, therefore, appeared frequently at the lord's table though it rarely visited the humble hut of the virgator. Fish also contributed to the variety of the diet, herring being eaten in those regions where fresh fish were not available.

The outstanding thing about the diet of this period was its lack of variety. The reason for the considerable demand for spices is largely due to an effort to alleviate the monotony of the diet. However, the quantity of spices imported into England was so limited and the consequent price so high that most of the supply found its way to the tables of the well-to-do. Thus those who already had the greatest variety in their diet and needed spices least secured the bulk of the supply while those with the greatest monotony and most imperative need found the price beyond the reach of their slender means.

3. CLOTHING was exceedingly crude and simple during the manorial period if the garments worn by the villeins are typical. Neither special night garments nor underclothes

had as yet come into vogue. The principal clothing materials were homespun woollens made from the wool sheared from the sheep which grazed on the manor lands and leather tanned from the hides of slaughtered animals. Some linen was also used. Clothing was designed for utility and durability. Its function was to provide protection from the weather rather than style. Fabrics made of cotton or silk were luxury articles used only by the wealthy. Furs were also used to some extent, especially by the clergy and the nobility.

## B. MANORIAL ROUTINE

Although food, clothing, and shelter throw important light upon living conditions, the most important aspect of the social process is the everyday routine. The round of commonplace activities constitutes the sphere within which the cultural pattern undergoes application.

1. AGRICULTURE: In an agricultural economy it is obvious that the chief routine must be centered about the preparation of the soil and the planting, cultivation, and harvesting of crops. Indeed, the customary techniques associated with these activities colored the whole outlook upon life and conditioned all the activities of the village.

The *fallow-field* method of maintaining soil fertility simply means that one field is permitted to lie idle once every two or three years. Considerable mystery surrounds the time of origin of this valuable agricultural technique, but by the early middle ages it was in common use in England. It is certain from modern experiments that the process of fallowing made larger yields possible. "Experiments conducted at Rothamstead for a series of years resulted in a production of slightly more than twelve bushels of wheat per acre when wheat was grown continuously, whereas eighteen bushels were grown per acre when an alternation of wheat and fallow was practiced." Owing to the fact that modern implements and methods of cultivation were used in these experiments the yields shown are higher than the medieval

yields, which were about six to nine bushels per acre, but it is believed that approximately the right proportions between the yields with and without fallowing were secured.

The typical manorial plough was a cumbersome device ordinarily pulled by eight oxen. Since ploughs and plough teams were owned jointly and used cooperatively, it would have been unfair to allow all the strips of one cultivator to be ploughed before those of the others.

The land was customarily ploughed three times a year. The first ordinary ploughing occurred in the autumn, a second ploughing in April, and a third during mid-summer. The furrows were, according to Walter de Henley, a foot apart, and the plough did not go more than two fingers deep. For pulling ploughs, oxen rather than horses were recommended both by Walter de Henley and by Fitzherbert because they were cheaper than horses, and also because they could be used for food when dead. Although the men were responsible for the ploughing, the back-breaking labor of hoeing the crops and keeping the weeds down was frequently undertaken by the women in addition to the multitudinous tasks of their largely self-sufficient homes.

The *rotation of the fields* was a technique which required every cultivator to adhere strictly to the specified routine, since each tenant had strips in each of the fields. In a given year one field would be designated for the planting of rye, or some other fall crop. A second field would be devoted to the cultivation of oats, or some spring crop. The third field was permitted to lie fallow. Of course the crop planted in the fall was ready for harvest the following summer and the crops planted in the spring required harvesting in the fall. The next year the fallow field would be planted with a fall crop and the third year with a spring crop.

2. ANIMAL HUSBANDRY: The care and utilization of domesticated animals also played their part in the routine of manorial life. The repetition of the yearly routine was a direct result of the combination of agriculture and animal



husbandry. In the early part of the year the time was taken up with ploughing and planting. Attention was immediately transferred to animal husbandry as the lambing season approached. This was no sooner over than the harvesting of hay and grain required the villein's labor. And by the time sheep shearing was over it was time to begin the autumnal preparations for winter. There were cattle to be slaughtered, cuts of meat to be salted down, and wood to be cut for winter fires. Fall ploughing had to be out of the way before winter settled down. Threshing and winnowing of grain could be carried on during the actual winter itself and when that was accomplished the smith's and carpenter's work which had been postponed all year had to be done. It was fortunate if these tasks could be accomplished before the spring weather required the beginning of the routine again. The women had a never-ending round of routine household tasks to perform in addition to the necessary but extraordinary tasks of spinning, weaving, and garment making.

3. INTERDEPENDENCE: The routine nature of manorial processes left but little room for the play of individual initiative. The very nature of village work required co-operative organization. The dates of ploughing, planting, and reaping were of vital importance to all, but due to the physical layout of the manor, ploughing, for example, could not be carried on by everyone simultaneously. No land was wasted in roadways or lanes and access to many strips could be had only by crossing the strips belonging to others. This made it essential that the strips designated to serve as lanes be planted last and harvested first. It was also important that no one be tardy with his harvesting, for the temporary fences were removed and the cattle turned in upon the stubble. The entire village was thoroughly organized into an efficiently functioning unit for ploughing, planting, and harvesting. The necessities of these production processes imposed a rigid routine upon one and all.

The close relationship between the individuals of the manorial group tended to produce a feeling of social solidarity. Among the many factors which contributed greatly to the group unity of the residents in a manorial village were the intermingled strips in the open fields, the common pasture lands; the required labor upon the lord's demesne, the nucleated type of village, the universally required attendance at the manorial court, and finally, their common membership in the parish church.

The village and its constituent individuals had little contact with other groups and no contact with other cultures. Its self-sufficient life, economically, socially, politically, and judicially placed many obstacles in the way of change. It restricted intercourse beyond the confines of the manor, and retarded the growth of national unity by fostering local loyalties.

The actual techniques of manorial production also contributed to the unification of manorial thought and behavior patterns. The methods of ploughing, the technique of field rotation, the process of harvesting, the distribution of strips in the open fields, the performance of boon-work and many aspects of manorial social life all combined to produce a surprisingly strict regimentation of life. This type of manorial organization was the unshakable foundation upon which the remarkably stable medieval feudal structure stood.

The lord held quite a different point of view toward the manor. He was inclined to regard it neither as a way of life, nor as a mechanism of production, but rather as a source of income. Indeed, the many feudal obligations which he received in the form of services, fees, fines, dues, and reliefs made this point of view a very realistic one. Three items emerge as the principal sources from which the bulk of the lord's income was derived: (1) rents which he received in money and in goods; (2) income from the demesne either through direct operation under a bailiff or by collection of a

ferm; (3) court fees and fines received in connection with the manorial courts.

The manor is thus seen to have played a dual role. For the masses of the English population it furnished a guide to conduct and a way of life. For the feudal and ecclesiastical hierarchy it provided the economic foundation which supported their superior social status and made possible their privileged economic position.

#### IV. FACTORS FOR CHANGE

It has been said that "change is the only constant thing in the world." Every culture, irrespective of type, eventually finds itself struggling with the omnipresent forces of change. Before manorialism had reached its height the features which were eventually to destroy it had appeared. Although there were many things which contributed to manorial decline, the most important factors were the commutation of services and the Black Death.

##### A. COMMUTATION OF SERVICES

Processes which come gradually and unnoticed frequently produce, in the fullness of time, the most profound alterations in the cultural pattern. Such was the case with the commutation of the services which a villein by custom rendered to his lord. First a few villeins and then gradually more and more made arrangements with the manorial lord of their village whereby they periodically paid a sum of money instead of rendering the customary services. This substitution of money payments for the former obligatory labor is known as the "commutation of services" because services were commuted into money.

1. PREREQUISITES: Certain conditions were necessary before a single commutation could possibly take place. First, there must be *sufficient money* in circulation to permit regular payments from villein to lord. Second, a *market* in which agricultural produce could be sold must exist to provide the villein with a cash income through the

sale of his crops. Finally, there must be an available *supply of free laborers* willing to work for wages. Before commutation the demesne lands were cultivated by means of the week-work services of the villeins but after these services were commuted into money payments the lord of the manor found it necessary to use the money in hiring wage laborers.

These conditions were being increasingly well met during the twelfth, thirteenth, and fourteenth centuries. Even when all of them were satisfied there was still no assurance that commutations would take place. A changed attitude on the part of both the villein and the lord toward the desirability of continuing the customary services was essential.

2. CONTRIBUTING FACTORS: What then were the motives which caused the villeins and the lord to look with favor upon the commutation of customary services into money payments once it became possible? What advantages were likely to accrue to each party? The lord was in constant need of money and this process offered a means of getting some. He often desired to go on pilgrimages or on crusades and needed cash for expenses; he wished a larger income with which to defray the cost of life at court; he needed money to meet the cost of wars both domestic and foreign; he wished to buy privileges or titles from the crown; or he wished money simply that he might hire efficient laborers. The needs and wants of the lords were many, and once the circulation of money was well established the needs of many lords for more money appeared to be chronic. In addition to all this, it had not escaped the notice of the lords or their bailiffs that when the peasant was called upon to work on the lord's demesne and was thereby prevented from tending his own crops he was an unwilling and "reluctant" laborer. Indeed it is easy to see why this was true. If he worked hard he gained nothing; if he worked slowly and rested frequently when no one was looking he lost nothing. He did not have a job to do, but rather a specified period of time to put in.

And if the work was unfinished or poorly done it mattered little to him, since it was neither his land nor his crop. The situation was quite different with the wage-paid laborer. His attitude toward the job was not the same since he was getting paid for his labor and was more disposed to exert himself. Furthermore, if he did not do a good job or if he wasted time he might be fired and thereby lose the wages which he so sorely needed for the support of his family. Indeed, the difference was so great that it has sometimes been asserted, possibly with slight exaggeration, that the labor of one free worker receiving wages was equal to that of three villeins unwillingly performing their required tasks.

The lord's gain was apparent. By receiving the money equivalent of one hundred days' labor from a villein, the lord could hire a free worker for one hundred days and get two or three times as much work done as the villein would have accomplished. Or the lord could pocket half of the money and still get as much work accomplished as under the old system. But the villein also gained. By commuting his customary services into a money payment he had all his time for work upon his own land, where his incentive was much greater. It soon became apparent that if he labored efficiently he could produce enough grain so that when he sold the surplus he would have more than sufficient money to pay the lord the commuted money value of his former services. He thus had the incentive of a possible financial profit to encourage him to labor efficiently and to exercise his initiative.

3. THE PROCESS was sometimes described as "selling to the tenants their services." This phrase puts it rather aptly for that is exactly what happened; the tenants paid for the privilege of laboring on their own land. It required many generations for these advantages to be perceived and for the belief in the customary and traditional methods to be broken down in favor of this innovation. The process was getting under way in the thirteenth century and was

by no means uncommon in the fourteenth century. After the process was complete the position of a villein was substantially like that of a freeman in that a money "rent" was paid for the land cultivated by the tenant.

4. SIGNIFICANCE: The commutation of services produced many significant results. It ushered in the use of money on a vastly increased scale. It undermined and ultimately destroyed the whole system of feudal land tenure on the manor. It made it difficult and finally impossible to distinguish between a freeman and a villein. It encouraged individual initiative and laid the basis for the appearance of the gain spirit (profit motive) in English agriculture.

## B. THE BLACK DEATH

Another important factor in the disintegration of the manorial system was the plague now known as the "Black Death," which visited England in the middle of the fourteenth century. The epidemic apparently began in the Far East, making its way along the great trade routes into Europe, where it devastated several countries and then jumped the English channel. It appeared first in England during August of 1348 in the southwestern counties and spread eastward and northward. The pestilence raged for only a few months in a locality and then subsided. Thus it moved like a wave across England: the southwest counties were ravaged from August, 1348, until May, 1349; the counties about London from November, 1348, until July, 1349; the eastern counties throughout the summer of 1349; and the northern counties in the winter of 1349 and the spring of 1350.

The disease struck with remarkable rapidity. Victims generally died within two or three days or even less. The appearance of black splotches on the skin has given rise to the term "Black Death," used in modern times. In the old records it is referred to as the "great death" or the "great pestilence." Not every person who contracted the disease died and the rapidity with which the signs of

recovery appeared was apparently almost as great as that with which death came in the fatal cases.

There has been conflicting testimony as to the proportion of the population that died. Some writers have contended that half of the people or even more succumbed to the disease. Others place the figure at something less than a third. Certain contemporary records seem to justify the higher estimates. Authentic records of other localities tend to support the lower estimate of mortality. Although the evidence is insufficient to warrant dogmatic statements the truth probably is that the relative mortality varied considerably from locality to locality. This point of view is supported by two facts. First, there is the recent finding that the epidemic consisted of a combination of two types of plague, namely, *bubonic* and *pneumonic*. The one, spread by fleas on rats, was apparently not unusually contagious. The pneumonic plague, however, had a much higher rate of contagion and was spread chiefly by direct personal contact. Secondly, any disease is more easily transmitted in sections of the country where the population is dense. In the more densely settled counties the contagious pneumonic plague would be especially disastrous. The combination of these two factors makes it possible to explain the wide diversity in mortality rates.

No such general decimation of the population could fail to have significant consequences for the social and economic structure. It is evident that the lords of manors benefited greatly by the collection of a much larger number of heriot taxes from the property of deceased villeins and by the payment of an increased number of reliefs on the part of tenants inheriting virgates. Often the complete extinction of many families permitted considerable amounts of land to escheat to manorial lords, who were then privileged to redispense of it or to retain it for their own use as they saw fit. Although such gains were real enough they were temporary, and when compared with the losses which the lords suffered they appear quite insignificant.

The lords' losses were a function of the effects produced upon the economic status of villeins by the plague. The cost of manorial demesne farming rose considerably. Not only were their rents smaller in amount but the reduction of population caused a shrinkage in the other sources of the lords' cash income as well. For example, the fees collected in the manorial court were smaller in amount because fewer tenants remained to pay suit at the court and because the lord could not afford to be so high handed in the assessment of fines. Likewise, the lord's monopoly of the mill was less remunerative than formerly.

The economic conditions of the tenants who still lived were improved. Their costs of living had not increased very much. They still had the same huts that had belonged to their fathers. They still made their own clothes and grew their own food as previous generations had done and when they labored for the lord or freemen they received higher wages and better treatment.

It must not be hastily assumed that these changes took place suddenly. Nor is it to be imagined that the nobility relinquished their former incomes and their traditional activities without a struggle. Far from it!

When confronted with rising labor costs and diminishing incomes they turned to Parliament for aid. Appealing to the central government was quite natural for the employers of labor, since as landlords they were well represented in Parliament and might expect this body to pass whatever legislation they required. When Parliament met in 1351 it passed the "first Statute of Laborers" which set up a standard scale of wages for various classes of laborers and required men to accept work when it was offered to them at the established rates. Twice a year all laborers were required to swear that they would abide by the provisions of the law. Any person who refused so to swear was to be put in the public stocks or sent to jail until he was willing to abide by the law. The mechanism of the law was elaborate and the provisions were forceful, but wages did not come



down. In order to secure laborers, employers became parties to its violation.

The employing class did not confine its efforts to parliamentary action. The lords clung tenaciously to whatever services had not been commuted, and reclaimed those which had been commuted only for a stated period. The chief results produced by these efforts were ill will and concerted resistance.

As a matter of fact commutation of services went on faster after the Black Death than they had before and on terms more favorable to the villeins. The lords could not keep their tenants unless they consented to grant favorable terms. If their tenants went away, the lords would be left without either services or rent. Consequently, they granted more favorable terms.

The Black Death itself did not produce any immediate revolution in the social and economic order but it did lay the basis for future changes as well as accelerate the rate of contemporary changes. It is hard to tell whether the Statutes of Laborers had any appreciable effect in keeping the wages from going any higher, but there is no doubt that efforts to enforce the law and frequent punishment of individuals for its violation embittered the minds of the laborers and helped to throw them into opposition to the government and to the upper classes generally. One of the important social results of the Black Death was the general disturbance it caused in the social and economic relations of life. Above all, it shattered the traditional stability and thus facilitated future change.

## V. EVALUATION

To evaluate manorial social and economic arrangements in relation to the needs and circumstances of the times in which they existed and from the point of view of the people whom they served is a very hard task. It is as difficult to pass judgment upon the manor as it is to appreciate the

position of the Negroes in the South before the Civil War. At worst, these systems were no doubt a curse to all concerned; slave and master, villein and lord, alike. At best, and perhaps even generally, these institutions were not inconsistent with considerable well-being. It is doubtful if we can say more of our own time. Modern industrialism creates an alarming amount of misery and degradation along with its many obvious blessings.

When compared with the twentieth century the manorial period unquestionably exhibits many disadvantages, such as: lack of scientific knowledge and inventions, absence of sanitation and medical knowledge, famines, plagues, and natural hardships of many sorts. However, one must not forget that many of the blessings of today are available only to the privileged few. Although yachts, private swimming pools, and air-conditioned homes can be produced today, thousands upon thousands of rural homes still do not have electric lights, running water, or plumbing fixtures. And when the millions of unemployed who now roam our city streets are kept in mind and compared with the economic security which the villein enjoyed in the use of his customary virgate it must be admitted that Gibbins used admirable restraint when he described the lot of the villein in the following words: "Though their life was rude and rough, it seems that the villagers were fairly happy, and, considering all things, not much worse off than their descendants are now" (about 1890).

Most writers seem to agree with this general point of view. The accounts of medieval famines have probably been exaggerated. Those that occurred were chiefly local. It is doubtful whether there was any more real scarcity than there is today; deaths from sheer starvation are common enough among us even now. In manorial times a general plenty of the essentials of existence was the normal condition.

Like every other culture, that of the manorial period presented certain undesirable characteristics along with many admirable features. But as a tried and tested way of

life it molded the pattern of everyday living for thousands upon thousands of people for hundreds of years.

### STUDY QUESTIONS

1. What causes for the rise of feudalism can you cite? Of what significance to the development of the English feudal system was the introduction of Christianity into England? What significant changes in the nobility resulted from the Norman invasion? Explain the following terms: vassalage, homage, fealty, fief, knight's fee, subinfeudation, manor. What obligations did a lord owe to his vassal? What obligations were due him in return?
2. What features of the Church gave it the ability to exercise powerful control over the people? What temporal powers did the Church exercise in feudal times? Describe the organization, jurisdiction, and functioning of the ecclesiastical courts. What was their relationship to the manorial courts? What was their relationship to the King's court?
3. What were the chief occupations of the several feudal classes? How did the feudal classes live and dress? What were their recreations? Summarize in brief outline the main features of the higher English feudal system.
4. How was the land on a manor laid out or apportioned? Briefly describe the social classes on a typical manor from the standpoint of (a) status, (b) obligations and rights, (c) holdings. How did medieval tenantry differ from ancient slavery? How is it different from modern tenantry?
5. What conditions promoted cooperation on the manor? Compare the advantages and disadvantages of the strip system of cultivation. Compile a fairly complete list of manorial agricultural techniques and tools. Do the same for craft techniques and tools on the manor. Compare the manor with American farming.
6. Identify or give the functions of each of the following: bailiff, reeve, steward, virgator, bovator, cottar, villein tenure, boon work, week work, pannage, Curia Regis, merchet.
7. Describe the chief social controls on the manor and discuss the significance of each. Describe the organization and functioning of the manorial court system. Compile a list of attitudes which you would expect to find dominant in a socio-economic milieu similar to that of the English manor. Does your list fit the facts as you know them?
8. What factors caused the decline of manorialism? Discuss each. Of what significance is the Black Death? What is meant by commutation of services? What conditions had to prevail before commutation of services could take place? What were the motives and reactions of

the lord toward commutation? Of the villen? Show why these attitudes were held. In what ways could a serf secure his freedom?

9. List the chief characteristics of manorial economy. How well did the manor meet the requirements of its day?
10. What features or aspects of feudal society are still found in our present social order? What dominant features of our present socio-economic structure were missing in feudalism?

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## *Chapter Five*

# Urban Feudalism

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### I. TOWNS

After centuries in which the land was dominated by the traditionalized manorial villages which characterized the period of agricultural feudalism a new and distinctive type of population center began to appear. These new centers, which we shall call towns to distinguish them from the smaller and earlier centers of population, did not appear suddenly. Neither did they displace all the older villages. Instead they mingled with them, growing out of some of the more advanced villages and dominating others.

### A. ORIGINS

An important change in social and economic life, such as this transition to a new type of population center, could not occur without affecting other phases of life and only after being called into existence by changed conditions in the environment. What factors in England were favorable to the replacement of the self-sufficient agricultural communities by the new towns with their greater populations, larger markets, increased volume of trade, more elaborate social structure, and increased political importance? An examination of the origins of these towns shows that there were nearly as many specific reasons for their growth as



there were towns. However, these diverse factors can be classified into two or three principal groups.

1. **DEFENSE:** The necessity of defending the crops and homes of the village from hostile feudal lords in neighboring regions as well as against invaders from more distant lands required rather elaborate precautions. Forts of wood and castles of stone were built for defense. Each such central structure usually protected the surrounding shire. From it the warriors went to battle, and to it the peasant population retired when besieged. It was but natural that such a center should attract a larger permanent population than a purely agricultural village and also that there should spring into being in such a military town taverns and markets for the accommodation of temporary residents and visitors. Some such forts and castles date from the struggle with the Danes in the tenth century. The modern English towns which possess names ending in "caster" or "chester" show evidence of Roman military influence. Some actually originated in early Roman "castra" or garrisons. Such towns as Lancaster, Manchester, and Leicester probably owed their initial growth to the stimulus provided by the necessity for defense.

Monasteries and cathedrals should also be included under the category of defense. Respect for the Church and all its institutions during the feudal centuries was so great that even the professional fighting men generally refrained from ravaging its lands and from harming anyone within the protecting walls of its buildings. The town of St. Albans may be cited as an example of one which grew, at least in part, as a result of the protection afforded by the presence of a religious institution.

2. **COMMERCE:** It is likely that a greater number of towns owe their beginning to commercial factors than to defense. The most obvious of the commercial reasons for the growth of a town is a good harbor. English towns such as Southampton, Bristol, London, and Liverpool owe their development to the trade which came to them as a result

of their favorable location for shipping and commerce. Almost any circumstance which was advantageous to the conduct of trade could be relied upon to produce a town. At places in rivers where smooth hard bottoms and relatively shallow water at most seasons provided fords, the essentials of a town often appeared. In fact, the hazards of the river crossing actually increased the likelihood of a town, since at high-water times the flow of traffic was interrupted and the merchants required lodgings, storage facilities, markets, and the general services supplied by towns. Road intersections and river mouths were also favorable places for the development of towns. Oxford may be taken as an example of a town that grew at the location of a ford. Cambridge and Aylesbury grew out of the situation caused by the intersection of two roads, and Exeter was located at the mouth of a river. It must not be supposed that every town which appeared at a favorable commercial site during the period of urban feudalism has experienced an unbroken life down to the present day. Many of those early towns have since completely disappeared owing to the alteration of topography or the changing social and economic conditions of later periods.

It is interesting to note that monasteries and cathedrals also contributed to the commercial origin of towns. Many of them contained some sacred relic or some shrine which devout worshipers were willing to come many weary miles to see. It is probable that among the pilgrims there were some who came more for the excitement and pleasure of traveling than for purely religious reasons. Inns, taverns, markets, and fairs were set up for the accommodation and convenience of the many strangers who stopped in the vicinity of these holy shrines. It was but natural that many of the travelers brought with them the typical products of their home localities in the hope of exchanging them to advantage with other travelers. Thus profit and religion, business and pleasure, were combined even as they so often are today.

3. **MINOR FACTORS:** Some towns did not rise from either of these but simply grew larger in the normal process of expansion by which the agricultural "vill" grew into a town. Certain other towns seem to have been aided in their early growth and development by special political or social factors. For example, places where the King's court was held seem to have attracted a good many persons and the accommodation of these people and their retainers required the provision of services typical of a town.

## B. STRUCTURE

The citation of town origins tends to oversimplify the apparent differences between the agricultural, custom-bound, politically dependent village and the economically advanced, socially complex, and politically autonomous town. To what extent the institutions of the village were altered and to what extent new forms and practices were created may best be made plain by a description of the institutional structure of a typical town.

1. **CHARTER:** From the point of view of the inhabitants the most important characteristic of a town was its charter. It was this document which distinguished the town from the dependent village. Under feudalism each person owed allegiance to some other person. The dependent village was thus composed largely of persons who were not freemen and who were dependent upon a manorial overlord for their social status and for the possession of the land which they tilled. The citizens of an autonomous town owed allegiance to no feudal overlord, and paid no feudal dues and obligations. This emancipation from feudal bondage was originally won and confirmed by the town charter.

a. **GRANTORS:** Under various circumstances, such a charter might be procured from the king, a baron, or the Church.

Three English *kings* distinguished themselves by the granting of numerous charters. It is probable that William I, Henry I, and John were no more generous and no more solicitous for the welfare of their subjects than were many

other English kings, but they happened to live at a time when the rising merchant groups were clamoring for additional privileges. They also happened to be somewhat harder pressed financially than certain of their predecessors. The granting of charters, for a consideration, proved to be a new and relatively easy way to raise extra funds. The regular income always seemed to be inadequate even for the regular expenses. Extraordinary expenditures consequently required extraordinary receipts such as the sale of charters—a very great help to a monarch harassed by the unbalanced state of his budget.

The kings were not the only ones troubled by financial difficulties. The *barons* found themselves in an expensive struggle for increased power and prestige. The cost of maintaining their followers and of participating in the elaborate and luxurious court life was great. The Crusades also drained their pocketbooks and exhausted the ordinary sources of revenue from their estates. Frequently, therefore, they too chartered towns located upon lands which they held as fiefs from the king. And they, like the king, exacted as large a payment for the privileges granted as could be secured under the circumstances surrounding the bargaining in each particular case.

The *Church* was the largest single landowner in England. It was, therefore, inevitable that some of the new towns should be found on Church lands and that the merchants and inhabitants in those towns should want to free themselves from the obligations which they had inherited from their fathers and grandfathers. Unfortunately for these people the Church resources were large, its land productive, its revenues ample, and its expenditures regular. As an institution it was conservative, basing its practices upon tradition, custom, and usage. Its ideology as well as its stability rested upon ceaseless resistance to innovations. Thus, it is evident that the inhabitants of towns located upon Church lands faced a quite different situation in bargaining for their charters than did those who were

fortunate enough to reside on land held by secular powers. It is not surprising that the Church was slower to grant charters and did it only after great pressure and inducement.

The provisions of charters reflected the relative attitudes and powers of the three types of grantors. In general the king granted the most liberal charters. The king was at a considerable disadvantage in exacting specific payments for specific immunities. The king's primary considerations were revenue and political support. By granting maximum immunity from feudal dues and personal obligations he not only gained the maximum revenue but also the good will and political support of the merchant class. The barons, on the other hand, depended upon the citizens of towns in their demesnes to furnish much of the military services which they, the barons, owed the king. Monetary payments were an important but secondary consideration. Furthermore, once a fixed payment had been accepted from a town the baron had increased difficulty raising the uncertain relief payments such as those required for knighting the king's son or ransoming the king's person. The barons, therefore, tried to exact payments for specific rather than general immunities. By reserving certain dues and services they were able to meet the extraordinary demands of the king or another overlord. Finally, the Church usually granted the least liberal charters and for very good reasons. Unlike the king or nobility, the Church did not have exploitation as its motive. The primary concern of this institution was salvation. Although a charter did not interfere with the control of the religious life of the town citizens, it did lessen the control of the Church over the economic activities of the citizens. In addition it stimulated trade and business, both of which were frowned upon by the Church. As a result, the Church granted very limited charters and usually only after a town threatened to petition the king. However, as chartering became more general, the provisions became more liberal in all instances and contained a number of broad provisions.

b. PROVISIONS contained in charters may generally be divided into four broad types. First, *mercantile privileges* of various kinds were stipulated. Since the merchant class was, at this time, usually the best organized group in the town and the most active in agitating for the granting of a charter and in the collecting of the necessary money, this class made sure that the privileges granted were to be vested in their own organization—the merchant guild. The privileges conferred might even include a monopoly of the trading within the chartered limits of the town.

Secondly, the charter contained concessions which limited or abolished the payment of feudal dues and customary obligations by the inhabitants of the chartered town. Instead of the onerous personal services, the fines, fees, and numerous petty exactions, provision was made for the payment of one lump sum, called the *firma burgi*. The town was privileged to collect this sum in its own way, usually levying on real property, sometimes imposing a tax upon sales and occasionally upon goods imported into the town. The *firma burgi* was ordinarily secured for a period of years with the hope that at the end of that time the agreement to accept these annual payments in lieu of the former feudal obligations could be renewed. Sometimes, however, a permanent agreement was made.

Provisions granting *personal freedom* to the inhabitants of a town constitute the third class of charter stipulations. There is an old German proverb to the effect that "Town air makes a man free." Indeed, freedom of the town seems to be the very essence of the town charter. Any person who lived in a chartered town for a year and a day without being apprehended acquired his freedom and shook off the shackles of serfdom. The concept of citizenship arose to distinguish those who were entitled to enjoy the privileges of the town from those who were not so favored. Citizens were no longer bound to the soil as they had been on the manor. They might come and go freely in the town and might leave it at will. They could buy and sell goods and

property in their own names and even acquired the right to designate the heirs to whom they wished to leave their property.

The tenure upon which real estate was held was known as "burgage tenure" and was the closest approach to complete private ownership of property made during the middle ages. This was quite an advance over the manorial arrangement by which the property of a villein passed by custom to his oldest son or escheated to his overlord. With this new freedom went the privilege of marrying for love. It was no longer necessary to obtain the consent of an overlord who might refuse to sanction a marriage if the union did not advance his economic interests or suit his fancy. Finally, a very important economic privilege was the right to engage in an occupation of one's own choice and to change it at will. This tended to give much greater elasticity to the economic system and promoted efficiency in both business and technological arrangements. Thus all the citizens of the chartered town came to enjoy equal freedom and comparable privileges.

A fourth class of provision in the charter dealt with *local autonomy*. Since the town was solely responsible for the collection of its own revenues it is not surprising that it should be given a much greater voice in the management of its government than had been the case under a feudal overlord. The election of town officials was vested in the free adult, male, citizens of the chartered town. This municipal government was empowered to pass ordinances for the governing of the town and to make regulations concerning the conduct of trade within the town limits. Sometimes local courts for the administration of law concerning sales, the passage of title, and the collection of debts were set up. When the town was wealthy and powerful a considerable degree of independence and local autonomy was achieved subject only to the authority of the king. In less influential towns there was a more limited local autonomy.

Although a few enlightened overlords were able to see that a progressive and prosperous free town would be a greater asset to their domains than a sullen and unprogressive community, the majority of feudal lords were thoroughly opposed to the changes that were taking place about them. When their consent was necessary to the changes it could only be secured by organized pressure of an economic or military sort. Occasionally an actual armed revolt was necessary and on the European continent more than one was sometimes required. In Milan, for example, it took four revolutions before the power of the overlord was completely broken, and in Tours twelve revolts were required!

2. PHYSICAL LAYOUT: Owing to the more or less continuous threat of hostilities the towns were frequently surrounded by walls. Beyond the walls were arable fields, pastures, wastes, and woodlands similar to those which surrounded the open manorial villages, and the citizens possessed rights in these fields similar to the rights possessed by villeins in manorial fields. In early towns the shops and houses of the walled area were practically deserted during the busy harvesting season, when the majority of the townsmen were reaping the harvest. The town proper consisting of houses and shops was confined to those areas surrounded by the wall. So far as the appearance of the towns was concerned these shops were the chief characteristic by means of which towns could be distinguished from the manorial villages which dotted the English landscape.

As time passed the central government became stronger and the power of the feudal nobles waned. Law and order gradually came to the countryside, and, as the necessity for defense diminished, the walls were permitted to fall into decay and trading was carried on along the roadside beyond the gates. Later temporary booths and stalls were erected. Finally, permanent structures and even residences were built outside the walls. The original walled section continued to be regarded as the central "urb" or "burg" and the new



settlements that were spreading over the outlying fields as the population grew were regarded as "sub-urbs."

In the thirteenth century there were in England 200 towns which could be distinguished from agricultural villages by their size, by their form of government, or by the occupations of their inhabitants. According to modern standards, however, these towns were still relatively small, since the average range of population for the "smaller" towns was from a minimum of about 500 persons to a maximum of about 6,000. Even the "larger" towns were small by modern standards, for York and Bristol had only about 10,000 each in the thirteenth century and London took first rank with no more than 25,000 inhabitants. The most common size was from 1,500 to 4,000.

### C. EFFECTS ON MANORIAL LIFE

It was inevitable that the evolution of towns should alter the milieu in which manorialism functioned and should thus produce changes in manorial life itself. Although there were many minute details in which manorial life was altered during these centuries there were three great changes resulting from the growth of towns which overshadowed all others. First, the possibility of escape from a manor to "an island of freedom in the sea of serfdom" rendered villeins less contented and made them bolder in their requests. Their overlords, in turn, found it necessary to be less exacting in their demands in order to retain the tenants on their manors. In spite of more vigorous efforts to apprehend and reclaim runaway villeins an increasing number found it possible to escape and to remain undiscovered in some town for a year and a day.

Second, the commutation of services into money payments was undoubtedly facilitated by the growth of towns. The town market afforded a means of disposing of surplus grain. The money received in exchange was available for making cash payments to the feudal lord as a substitute for the customary personal services. This availability of cash

was obviously the first requisite for commuting obligatory services into fixed money payments. The availability of money also made it possible for some residents of the manor to hire wage laborers, who worked under the stimulus of cash wages and the fear of losing their jobs. The villeins, who were obliged to labor a specified amount of time each week, neither feared the loss of their jobs nor had a chance to gain anything by hard work. This favorable comparison between the industrious wage earners and the slothful villeins was apparent to all. One laborer did the work of two or three villeins. The lords consequently desired wage labor rather than customary service and knew that they could get it by permitting villeins to pay them money with which they could hire workers. Thus the larger productivity of wage laborers caused the lords to look with greater sympathy upon the desire of their dependent villagers for commutation.

Third, the increasing inability of the towns to provide their populations with adequate food and with sufficient raw materials for the craftsmen led to a greater and greater dependence upon the agricultural sections of the country for these things. The rural regions now had a surplus to exchange and the towns had an excess of manufactured goods to give in return. Thus began that specialization of functions which is now so apparent between the rural and urban regions of every advanced country.

## II. THE SOCIAL STRUCTURE

From an economic and a social point of view the thing which most clearly distinguished the town from the village was the dominant occupation of the inhabitants. Trade constituted the very reason for the town's existence. The development of a market, the appearance of a specialized class of traders, and the evolution of a group of handicraftsmen constituted not only the economic life of the town but provided conditions which gave rise to the organization known as the merchant gild.

## A. MERCHANT GILDS

It was in this group of leading town merchants that the privileges conferred by the town charter were generally vested. The earliest mention of such an organization occurs in the charter granted to Burford near the end of the eleventh century. The organization was not ordinarily confined to members who devoted their whole time to merchandising but also included craftsmen who engaged in trade to a limited extent and in a manner incidental to their main occupation, the fabrication of goods by hand. Such an artisan ordinarily worked in his own home workshop, producing finished goods which he then sold in the same shop to the ultimate consumer. In the early towns of relatively small population there were only a few artisans in any specific trade and sometimes only one such workman. But these persons, as well as those who gave all their time to trading, found the gild merchant a valuable organization well suited to the protection of their interests. Its primary concern was the establishment and maintenance of a monopoly of trade for its members.

1. THE ORIGIN of the merchant gild can be ascribed to two principal factors: the growth of trade and the practice of chartering towns. The development of town markets where goods were exchanged on the basis of monetary value or price and the rise of importing merchants who catered to the wants of the ruling feudal classes combined to promote an urban group with common economic interests. These forces laid the basis for the formation of a gild of merchants, especially in seaport towns. The immediate and often the sole factor in the rise of a powerful merchant gild was the purchase of a charter. The feudal obligations of freemen were most unsatisfactory to merchants and craftsmen. The rendering of military service greatly interfered with the conduct of any type of trade or handicraft work. The payment of reliefs such as knighthooding fees, dowry, or ransom was uncertain in time and amount. Often such payments came

at a time when a merchant had the smallest stock or the least amount of money on hand or required such a large sum as seriously to handicap his business. The payment of regular dues or rents entailed the least disrupting influence in the life of merchants and probably suggested the commutation of all dues into one lump payment. To raise an enticing sum merchants formed a gild and tried to induce all citizens of the town with business interests to join. It was common practice for the king to receive a petition for a charter from such a body. Usually the responsibility for the payment of the yearly town rent, the *firma burgi*, rested with this body. It also became the active agent for the compilation of the rent through the assessment of taxes as well as the dispenser of the privileges conferred in the charter itself. The organization and functions of the merchant gild reflected its important position as the holder of the charter.

2. THE ORGANIZATION of the merchant gild was relatively simple and flexible. Membership was widespread, although being a burgher, or citizen of the town, was not synonymous with gild membership, as is sometimes supposed. There were some burghers who were neither traders nor craftsmen and consequently were not gildsmen, and occasionally gild membership was extended to persons who were not citizens. This is not surprising, since one of the requirements for burgher status was the ownership of a house or shop in the town and not all artisans could meet this requirement. However, it was not hard to get into the gild because the organization was anxious to have every merchant and craftsman in the town on its membership roll in order that the monopoly of trade might be better regulated in the interest of all. The gild assembly, consisting of all the members of the organization, elected from its ranks a council, which was the body that drew up and passed regulations. This same legislative council was expected to act in a judicial capacity in the settlement of disputes among members. The execution of the rules and regulations passed by the council rested in the hands of an elected official, generally

given the title of Alderman. He served as the directing head of the organization—a position which increased in importance as the organization grew in size and power.

3. THE FUNCTIONS which the merchant gild performed may be divided into three distinct types—regulatory, fraternal, and civic.

a. THE REGULATORY FUNCTIONS were the most important from the economic point of view. The gild was able to supervise all dealings of its members. It stipulated the times and places of sale and even took an interest in the matter of price. In the town of Southampton there was a provision that no one could buy anything in the town and resell it there unless he were a member of the gild, although outside merchants might bring goods into the town and sell them under strict supervision. Gildsmen were strictly prohibited from forming partnerships with “foreigners,” that is, anyone not permanently residing in the town. Members of the gild were always restricted in the amount and kinds of goods in which they dealt. The primary purpose of all gild regulation of member merchants was to assure an equitable distribution of the trade in the town.

In addition to regulations governing general trade the gild merchant supervised the work of all craftsmen. The gild maintained “inspectors,” whose duty was to see that all products conformed to specified minimum standards of quality. Articles which did not come up to this minimum could not be offered on the market. It is likely that these standards were originally intended to protect one gild member from another who might be inclined to reduce the quality of his products in order to make a larger income. However, it also had the effect of protecting the consumer against shoddy and defective merchandise. Of course it must be pointed out that the body of consumers and the body of producers were at that time much more nearly identical than they are now, when producers’ lobbies can kill, one after another, the Congressional bills which attempt to protect consumers against shoddy, harmful, or useless

products in the field of drugs, patent medicines, and cosmetics. Many consumers look back to the honest workmanship of the handicraft period with sincere longing for the reestablishment of quality standards in the enlarged market of today.

The regulatory activities of the merchant gild did not stop with the economic field but extended also to the personal relations of the gildsmen. The whole structure, although organized primarily in the interest of economic betterment, was strikingly like a fraternal organization. The members were known as "brothers" or by some similar term, and the ideals of justice, fraternity, and equal opportunity were reflected in many of their regulations. For example, any member was permitted to share in the bargains found by any other member. No brother could go to law against another brother, at least not until the dispute had first been submitted to the gild council for solution.

*b. THE FRATERNAL FUNCTIONS* of the merchant gild were simply an extension of the regulations concerning personal relations. The organization took particular pains to care for the welfare of its members in a variety of ways. These resemble the functions and services performed by the lodges and fraternal societies to which a large number of adults belong today. The members, for example, went as a body in full regalia to attend the funeral of any deceased member. They rendered financial aid to the widow and orphans whom he left. They built up funds to help members in sickness or in periods of unemployment. The organization rendered assistance to members in the collection of their debts and would even aid a member by assisting him in his release from prison, especially when located in "foreign" towns.

*c. THE CIVIC FUNCTIONS* of the merchant gild centered around its control of the privileges granted in charters of free towns. Indeed, in some thirteenth-century towns membership in the gild and citizenship in the town seem to have been practically synonymous and the officials of the two organizations identical. Even in towns where the simi-

larity of the two was not so great the gild discharged many civic functions. Ordinances (known as assizes) regulating the prices of various commodities were passed and enforced. The administration of justice was attempted in that special branch of law, the *Lex Mercatoria*, which dealt with commercial cases. Indeed the gild extended its activities into the governmental function of tax collection.

In chartered towns the kinds and amounts of levies made upon land, buildings, trade, and even persons were determined chiefly by the council of the merchant gild. The original purpose of this accumulation of a fund was to meet the yearly payment of the *firma burgi* to the town's overlord. As the town grew larger the administration of civic functions required the full time of a staff of executives. These officers came to constitute the official government and came to be elected from the powerful craft gild organizations which arose as town population increased.

4. **DECLINE:** The merchant gild had been well adapted to serve the needs of a town with a relatively small population. But with the appearance of a *larger town population* and groups of specialized craftsmen the old organization failed to fit the new conditions and gradually became functionless. The rising craft gilds absorbed and more efficiently performed most of the regulatory and fraternal or mutual-aid functions, while the town government, which was growing steadily in size and importance, assumed the civic functions. The decline of the merchant gilds is but one phase in the development of new economic conditions and the rise of the powerful craft-gild system. Most of the merchant gilds disappeared entirely but a few survived as purely fraternal organizations.

## B. CRAFT GILDS

1. **ORIGINS:** For the real origins of the craft gilds we must return to a period prior to the decline of the merchant gilds. In the manorial village most of the handicraft work was done by the unspecialized villagers, each a "Jack of all

trades." There were few specialized craftsmen. The blacksmith who did general metalwork, the miller who ran the grist mill, and the ploughman who cared for and repaired the ploughs were the principal ones. In the early towns there were more kinds of craftsmen but still only a small number of individuals in any particular craft. As the towns grew larger there came to be a greater number of services performed by specialized craftsmen. This increased specialization widened the market still further for each type of service and thus gave opportunity for a larger variety of artisans in each craft. As the process of specialization and growth continued the organizations known as craft guilds were formed to meet the problems more adequately and to care for the special interests of their members.

Although the growth of the towns probably constituted the most important factor in the origin of the craft guilds, there are other factors which must not be overlooked. The custom of the day was for the members of the same craft to live in one neighborhood, frequently all on one street. This close association naturally tended to bring them together in their social life as well as in their business life. They attended the same church and sat in one section for the services. When the practice grew common for religious pageants or plays to be presented in the streets upon certain great religious-festival days the members of these semi-religious craft organizations were not slow to take part in them, and it soon became customary for the members of each organization to present a particular pageant. The fact that they are called "*mystery plays*" requires explanation.

Prior to the fifteenth century the gild organizations were usually known by the term "*mystery*," which comes from a French word "*métier*" meaning trade, handicraft, or craft. Thus the "*Mystery of Vintners*" meant the craft organization of the wine makers. Consequently the religious pageants put on by these organizations were called "*mystery plays*," although they had not the slightest relationship to our modern "*mystery dramas*." It was also customary for each



mystery to select for its presentation some incident as closely connected with its own craft as possible. Each group presented its play upon a movable stage at some designated hour and street corner and then moved on to another location, where the play was repeated. Thus each of several locations had a complete presentation of the pageant.

A number of craft guilds began their existence as religious fraternities. It is easy to see that when such an organization was composed of men all practicing the same trade there would be a tendency to "talk shop" and that the economic interests of the members would gradually come to dominate the original religious purposes. Thus the trade sections of the town, church attendance, mystery plays, and religious fraternities all contributed to the spontaneous tendency toward organization along occupational lines.

In spite of their religious affiliation some craft guilds acquired bad reputations as a result of fraudulent practices of individual members. In such guilds the governing council often went to the town officials and asked them to authorize the appointment of inspectors to help abolish these evils. But if the initiative did not come from within the organization the public often asked for protection, so that in time the town authorities insisted upon supervisors in each craft to detect and punish all "false work." In London, for example, a general ordinance was passed which provided as follows: "It is ordained that all the misteries of the City of London shall be lawfully regulated and governed, each according to its nature in due manner, that so no knavery, false workmanship, or deceit shall be found in the said misteries, for the honour of the good folk of the said misteries and for the common profit of the people. And in each mistery there shall be chosen and sworn four or six, or more or less, according as the mistery shall need; which persons, so chosen and sworn shall have full power from the Mayor well and lawfully to do and to perform the same."

The growth of craft guilds may thus be traced to a number of factors: the growth of towns, spontaneous internal

tendencies, religious observances, preservation of the craft reputation, and public protection.

2. THE DEVELOPMENT of the craft gild falls into four general periods. The first or *formative period*, covering the late thirteenth century and early fourteenth, was characterized by the spontaneous organization of artisans and by their struggle for existence with the town authorities, who were dominated by the merchant gild. The *period of crisis* occupied the middle half of the fourteenth century (1327–1377) and was characterized by the rapid expansion of the wool trade and the increasing power of the king. During this period the craft gilds succeeded in gaining their independence from the merchants and from the town authorities and in expanding their jurisdiction beyond the confines of purely industrial pursuits. The *period of growth* occupied the remainder of the fourteenth century and part of the fifteenth. With the decline of the merchant gild the town authorities changed their attitude from one of hostile tolerance to one of sympathy and actual encouragement. The important privilege, known as the freedom of the city, was largely restricted to craft-gild members, which made membership very important. Anyone not possessing the freedom of the city was liable to be impressed into the navy, thrown into jail for trivial offenses, or subjected to other inconveniences. Apprenticeship was in the process of establishment as the method of entrance to a gild, and journeymen were beginning to appear as a separate class.

The *period of maturity* occupied the remainder of the fifteenth century and all the sixteenth. Indeed the powers of the gilds remained almost entirely unimpaired until the beginning of the domestic system, which will be discussed later. The status of apprenticeship and that of journeyman-ship had been firmly established. In fact they were so firmly established that toward the end of the period some journeymen were finding it difficult or impossible to rise into the class of master craftsmen. By the end of the sixteenth century the conditions comprising the social milieu were under-

going such extensive changes that the members were finding it more and more difficult to adapt themselves and their organization to the new circumstances while it was becoming easier to assume an attitude of opposition to the innovations. Although they adopted a policy of obstruction, they could not hold back industrial evolution.

3. THE FUNCTIONS of craft guilds were similar to those of the merchant gild from which they grew. In fact, the old merchant gild became a mere honorary society as its economic functions were absorbed by the craft guilds and its political functions by the emerging politicians who came to constitute the formal town government. The functions of craft guilds fall into four broad categories—regulations, education, mutual aid, and recreation.

a. REGULATION: The broadest in scope and the most pervasive function of craft guilds was regulation of the economic activities of members. In general these regulations aimed to preserve a monopoly of trade, to define the scope of each gild, and to maintain a rough equality among the members of a craft with regard to manufacture and sale of the product.

Like the merchant guilds, the craft guilds considered the maintenance of a *monopoly* for the benefit of their members to be one of their chief regulatory functions. Non-member craftsmen were detected, reported, and forced either to become members of the gild or to give up their occupation. The organization also included among its regulations a definition of the scope of the trade or craft, to prevent confusion concerning the types of work included within the jurisdiction of each craft gild. For example, shoemakers would not permit cobblers to make new shoes and cobblers would not permit shoemakers to repair old shoes. The American Federation of Labor likewise finds itself under the necessity of determining the jurisdictional limits of the various crafts included within its membership today.

Another aspect of the regulatory activities of craft guilds was the preservation of a rough *equality* among members.

The regulations against forestalling, engrossing, and regrating were designed to prevent one craftsman from taking undue advantage of another in the purchase of raw materials. Regrating in particular was intended to stop speculation on the market either at the expense of gildsmen or at the expense of the buying public.

*Forestalling* was the purchase of commodities before they were offered for sale in the stalls of the established town market, where all gildsmen would have an equal opportunity to share in the supply. A few ambitious gildsmen made a practice of going outside the town to meet merchants and "fermars" on their way to the market. This offered several advantages to the individuals concerned. The buyer could secure goods before the hour for the market to open and thus had more time in his shop. He also had the opportunity to get the best quality goods before they were offered to others in the market place. By offering to buy a "fermar's" entire stock of wool or grain he could often get a price concession, because in such a case the "fermar" could return immediately to his work on the manor instead of waiting for customers at the town market. Although this practice is not now regarded as unfair, the medieval gilds opposed it vigorously. It was believed that each gildsman should enjoy exactly the same opportunities and advantages as all other gildsmen. In the interest of equality of opportunity and the maintenance of just price the craft gild insisted upon transactions being made in the regular town market and imposed severe penalties upon forestallers.

*Engrossing* consisted of buying an unjustly large share of a raw material for the purpose of controlling the market or of gaining an advantage over one's fellow craftsmen. Among importing merchants in large seaport towns engrossing consisted of "cornering the market." Among craftsmen it consisted of gaining more than one's fair share of a raw material such as hides, wool, or iron. Craftsmen were particularly tempted to do this when there was a temporary shortage. Engrossing frequently involved forestalling, since

an unjustly large supply could only be obtained before the goods reached the established and well-controlled town market. Craft guilds prohibited engrossing for two reasons. First, the practice constituted a threat to the other gildsmen because it jeopardized their access to raw materials. Secondly, it gave the engrosser a return which was not earned through craftsmanship.

*Regrating* was purchase and resale at a higher price in the same market. A craftsman was expected to make his living by the fabrication of goods, not by trading in materials. Of course, each craftsman did buy raw or semi-finished goods, such as leather, and each did sell the finished product, such as shoes or boots, made from it. These transactions were legitimate, but to buy leather and resell the same leather in the same market for a higher price without having worked upon it was prohibited. In modern society, forestalling, engrossing, and regrating are not prohibited but are regarded as legitimate business methods, although the social effects are substantially the same today as they were in the gild-controlled medieval towns.

Even the selling of finished products was rigidly regulated with regard to time, place, and conditions. The baking of bread in London provides a good illustration of the rigidity and severity of these regulations. Each baker was required to stamp his loaves with his own seal. Every fall after the grain had been cut the weights of the penny and halfpenny loaves were fixed for the following year. The weights decided upon depended largely upon the bountifulness of the fall harvest. Any baker whose loaves were found to be under this standard weight was severely punished for his negligence or fraud. It was illegal to make and sell white or brown bread in one's own house. Bread might be sold to the public in only two ways: either twice a week from a special hutch, or to hawkers who cried their unwrapped wares from house to house, as is still done today in many old-world towns. The term "baker's dozen" came from the

practice of giving thirteen loaves rather than twelve as a dozen.

Equality was also promoted among craftsmen by the insistence of the powerful medieval Church upon the doctrine of *just price*. The necessity for market prices to conform reasonably well to the just price along with the minimum standards of quality set by the gild regulations and enforced by their own or municipal inspectors, tended not only to keep the gild members upon approximately the same level but also to protect the members of the general buying public from undue exploitation. Indeed, those persons who were caught defrauding the public could expect stringent measures to be taken against them. The wine trade in London provides a case of wine adulteration in which the offender was required to drink a large portion of his own adulterated wine and to have the rest of it poured over him while he was confined in the pillory. Bakers in London frequently were called upon to bake bread or cakes for customers who furnished their own flour. One baker was caught mixing such dough upon a board with a hole in it under which stood a basket to catch the dough that dropped through. This artisan was condemned to sit in the pillory with the basket of stolen dough hanging from a rope around his neck. Both the municipal authorities and the Church required the gild to take a sort of corporate responsibility to insure the good behavior of its members.

The craft gilds also concerned themselves with *working conditions* by prohibiting night work, setting the wages for journeymen, and stipulating the conditions under which apprentices might be employed. The limitation of membership in the early period of craft-gild organization was based upon skill. A prospective gildsman was required to demonstrate his skill by the submission of a "masterpiece." This requirement probably tended to preserve an approximate equality of minimum skill among all those who were admitted to the master status. Even after becoming full-

fledged masters, members were limited with respect to the amount of capital they could use, the number of workmen which they could employ, and sometimes the amount of work which they might do for others in the gild.

b. EDUCATION: Since there were no public schools to which children might go their education fell largely into the hands of the home, the Church, and the gild. The earliest education consisted of learning the language and other basic behavior patterns of the day. These the child acquired informally from his parents. His religious training came from participation in the numerous Church pageants and festivals and in the regular religious services held in the home and in the Church. But the vocational training of the young man, that essential training in the field of his life's work, was a primary function of the craft guilds.

At a rather early age the boy was taken from his home, where he had learned to talk and count but not to read or write, and placed by his father under the tutelage of some craftsman to "learn the trade" as an *apprentice*. The terms of apprenticeship ordinarily called for him to live in the home of the master to whom he was bound and to work for him during a specified period of years without wages. The time varied from three years to nine years or more but the most common period was seven years. During this period the master was obliged to instruct the youth in the trade and to provide his food and clothing in return for the labor which the apprentice performed as he acquired skill in the craft. Unfortunately these boys were often overworked and sometimes mistreated or cruelly punished. But in spite of its defects the system did work sufficiently well in the provision of vocational education to assure a continuous supply of skilled labor in the various crafts.

After graduating from apprenticeship the youth became a *journeyman* and, during an indeterminate period of years, completed his vocational training by doing job work for wages. Until fairly late in gild development a journeyman might look forward to saving enough capital to set up his

own shop and ultimately to becoming a *master* gildsman. Determining the requirements for each of the various stages of the process and the testing of the qualification of the applicants were obligations of the organization and were specifically provided for by various sets of regulations, stipulating the period of years for apprenticeship, how many apprentices a master might have, the privileges of the journeymen, and the specifications of the "masterpiece" required for admission to the status of master craftsman.

c. **MUTUAL AID:** Like its predecessor, the craft gild performed fraternal functions by providing a considerable number of beneficiary (mutual-aid) services for members. It granted relief to members in sickness or misfortune, provided burial services for the dead, and cared for their widows and orphans. It collected tithes and endowed religious services for the departed. In short, there was a feeling of group responsibility for the welfare of the entire membership. Of course the larger, stronger, and more wealthy organizations were better able to discharge these functions.

d. **THE RECREATIONAL FUNCTIONS** performed by the craft gilds for their members were closely related to the pervasive religious life of the day. The mystery plays, already mentioned, constituted one of the best organized forms of group recreation exhibited by the period. The numerous colorful religious festivals provided splendid general opportunities for the display of one's official regalia or "best" clothes, and for participation in social activities of a group nature, accompanied by much wine, song, and general hilarity.

4. **EVALUATION:** It seems indubitable that the merits of the craft gild outweighed its defects, especially in view of the fact that the organization must be considered, not from the standpoint of modern objectives and methods, but rather from the purpose of its members and the limitations imposed by the existent social milieu. The craft gild provided a practical monopoly of the trade for its members and thus assured responsible control over the volume of output. It



permitted the regulation of working conditions and rates of remuneration in the interest of the craft as a whole, particularly as represented by the masters. It provided a means of protection for individual artisans against the unfair or unscrupulous practices of members. It was a mechanism for the subordination of individual interests to the social welfare of a larger group. It constituted a responsible corporate body from which the municipal authorities could require aid in safeguarding the general public welfare. It furnished a sufficiently thorough vocational training to meet adequately the requirements of the day.

The weaknesses of the craft gild, like its advantages, centered in its monopoly power. Monopoly of a trade permitted not only its regulation but also suppression of innovation and the obstruction of progress. The craft-gild regulations, and the municipal ordinances which were associated with them, produced an inflexible system which restricted commerce and hampered trade. The whole system of controlled production was unconsciously postulated upon the continued existence of a static population which, unfortunately for the organization, failed to remain constant. The gilds, like every economic or social institution, appeared as a result of a given set of environmental circumstances, and when these changed they either had to face decline or adapt themselves to the new social milieu. Such a choice, of course, was neither clearly perceived at the time nor consciously made. The gildsmen themselves did not perceive until too late the importance of the gradual changes which were going on under their very eyes. The mature gild organization was inflexible and could not be adapted to the new conditions of the sixteenth and seventeenth centuries.

5. THE DECLINE of the craft gilds resulted from two sets of circumstances. The more general causes grew out of the social milieu. Accompanying these, and related to them, were a number of specific disturbances which contributed to the general decline.

a. SIX GENERAL CHANGES took place in the social milieu. The *market widened* both in the scope of products handled and in the size of the area covered. Both the Crusades and the ensuing commercial revolution were potent forces which aided the expansion of trade from restricted local communities into the world arena. A larger number of middlemen performed an increased variety of services and functions in the markets of England and Europe. The occupational division of labor, typical of the guilds, was supplemented by a *territorial division of labor* when different regions began to specialize upon the production of those types of commodities in which they enjoyed the greatest advantages. The *power of the central government* increased and the doctrine and policies known as "mercantilism" appeared. The medieval Church began to abandon its ethical objections to the gain spirit in economic practices, thus leaving the *profit motive* a freer field for its development. This of course stimulated the growth of what has subsequently come to be called "capitalism." The new concept of *natural law* in the scientific field stimulated "philosophical" writers in the social field to advance the idea of a "natural order of society" which, they said, would appear if the restraints imposed by regulatory bodies were removed. The growth of a society based upon the *concept of laissez faire* in economic relationships finally doomed the mercantilistic system and stripped from the few remaining guilds the last vestiges of economic significance.

b. SPECIFIC CAUSES: The underlying or general causes of a phenomenon are usually accompanied by specific surface disturbances. Just as a submerged boulder in the course of a stream, although itself unseen, is accompanied by surface indications of foam and spray which are apparent to all, so the gradual and unnoticed changes in the social milieu were accompanied by specific disturbances and difficulties which were apparent to every guildsman. They were confronted, for example, by the competition of *non-gild craftsmen*. Gild authority and control were limited to the town boundaries.

Until now, this had been sufficient to assure complete control over the production of handicraft work because in the earlier period the market had been confined to the town. But the multiplication of gild and municipal regulations, fees, and taxes drove some artisans to seek the rural regions to avoid these annoyances and expenses and thus secure greater freedom and lower costs. The domestic system, as we shall see, operated completely outside the gilds and offered them serious competition.

The population of England was growing at an accelerating rate. But the opportunity to become a gildsman was restricted by relatively inflexible rules concerning the number of apprentices and journeymen and the requirements for becoming a master. In addition the tendency to remove land from cultivation and to enclose it for sheep pastures, thus increasing the production of wool for which there was a profitable market, caused a flow of uprooted and unemployed persons from the country to the towns. Here they constituted an unskilled laboring class in search of employment at any task that would afford a livelihood. The gild could, and did, deny most of these persons admission to its ranks but it could not force them to starve peacefully in idleness. They found employment in unskilled occupations, created new trades, and even invaded the gild trades as the power of the gilds waned.

At the same time a *new class of employers* appeared. In the textile trades enterprisers were purchasing raw material and placing it in the hands of artisans whom they supplied with spinning equipment. After the spinners had completed their work, the enterpriser collected the material in the form of yarn and took it to the next artisan, or group of artisans, who then wove the yarn into cloth. Another group dyed the cloth, and so on, till the enterpriser finally sold the finished product on the market and collected the profit. That class of men who saw opportunities to buy and sell at different places and at different prices and thus to discover a margin between cost and selling price invaded not

only industry but agriculture and other fields of endeavor as well. These enterprisers constituted a new and rising bourgeois class. They began to exercise increasing influence upon the town government and ultimately gained control. The vested rights and privileges of the entrenched gildsmen did not secure such sympathetic treatment at the hands of this new group as they had previously enjoyed.

It is curious that *internal conflict*, which contributed greatly to the disintegration of the gild system, was generated by the very prosperity and position of power which the gilds attained in their period of maturity and was even inherent in the institution itself. This conflict was expressed in several ways. The exceptional success of some gilds was such as to distinguish them from other lesser gilds. Gradually the gilds fell into two groups, especially in the larger cities, like London, where there were the Great Companies and the Lesser Companies. The more powerful gilds then added still further to their power by absorbing some of the lesser ones. This disparity in wealth, position, and power between the gilds became a source of friction.

At the same time the gilds became more exclusive and less willing to accept new members. They raised the standards required of journeymen who applied for admission as masters. The entrance fees were increased and the expenses connected with maintaining membership rose. It was, of course, easy to reject the sample of work submitted as a masterpiece by an applicant. One may suspect that many a competent craftsman was turned down in favor of the son or cousin of a particularly influential official. As it became harder and harder to set one's self up in business as a master gildsman more and more journeymen found that they were doomed to spend their lives working for someone else. Unable to get into the gild, they found an easy solution in the formation of their own gild. These "journeymen's gilds" of the sixteenth century had a relatively short life, during which they struggled valiantly, but without success, against the organized opposition of the established gilds, as well as

against the changing conditions which were tending to destroy all guilds. Had it not been for the unfavorable changes in the social milieu the journeymen's guilds might have been much more successful. Under the circumstances, however, their principal contribution to the evolution of economic institutions was to weaken further the craft guilds.

Some of the more wealthy masters found that there was more money to be made in selling cloth and other craft products than in fabricating them. They tended to withdraw from the actual work of making goods and to concentrate their efforts on marketing them. Thus, they were really diverting capital from production under adverse conditions to commerce under the favorable circumstances of an expanding market. These persons found their greatest opportunities in textiles, particularly wool in England. Each of the twelve Great Livery Companies of London was engaged in merchandising some craft product. These wealthy guildsmen distinguished themselves by wearing very elaborate and costly costumes and regalia and were consequently referred to as being "of the Livery." Their appearance at festivals and ceremonies of various kinds must have been very impressive indeed, and tended to draw a rather sharp line of distinction between them and the ordinary guildsmen or craftsmen, who were not so well-to-do and had to be content with much less elaborate and costly outfits, if indeed they had any special costumes at all. Journeymen, of course, were still less satisfied with their lot in comparison with the splendid station in life occupied by these favored few.

The sixteenth century brought two acts by the national government which affected the guild system. The dissolution of monasteries in 1536 affected guilds indirectly because the monasteries had done a considerable amount of craft labor. Their dissolution thus affected the market. Second, the dissolution of religious guilds under Edward VI in 1547 caused some guilds to disappear entirely and required others to dis-

continue their religious functions. The loss of property held for religious purposes was a serious blow to the still powerful gilds and contributed greatly to their decline.

Although a small number of gilds survived down into the nineteenth century, and although there are a few gildhalls still standing in London as a remainder of their glorious past, the organization has not been important as an economic or social institution for over two centuries. The changes in the economic and social world about them, the opposition of rising groups with conflicting interests, and their internal difficulties caused the stream of workingmen's organizations to find a channel of expression through different institutions.

### III. SOCIAL CONTROLS

Every social system exhibits a body of social controls which operate upon the people living under the system and condition their behavior. Without such social controls the entire system would disintegrate, breaking down into a myriad of individual patterns each of which had no necessary relationship to any other one or to the whole group. Under manorialism we found that custom, tradition, conservative attitudes, the necessity of the routine imposed by nature upon agricultural communities, and more formal factors, such as the manorial court and administrative staff, constituted an exceptionally effective body of social controls. Indeed, very little room was left for individualism in any type of activity that was economically or socially important. Under the conditions of urban feudalism there was a larger sphere for individual variations in behavior but the formal and informal social controls were still very apparent and exceedingly effective. Gild rules, Christian concepts, formal religion, an educational system, and well formulated group-attitudes, were the five major forces which impinged upon the individual and made him conform to the pattern of medieval town life.

## A. GILD RULES

Gild rules were rather formal social controls definitely articulated for the purpose of controlling the behavior of that part of the population which came under the jurisdiction of the gilds.

1. THE ORIGIN of these rules can be traced to three factors operative from the beginning of urban feudalism: population growth, specialization, and the influence of the municipal government.

First, the *expansion of town population* was accompanied by an increase in the number of crafts and craftsmen. This gave rise to a desire on the part of honest workmen to be protected against unscrupulous gildsmen as well as against irresponsible non-gild producers. Of course, the craftsmen who were gild producers were also the customers of other gildsmen. The general buying public wished to be protected in all its purchases. Many early gild rules originated out of a desire to prevent undesirable trade practices.

Second, *increased specialization* made workers less competent as judges of the quality and merits of the products of other crafts. When each man was a "Jack of all trades" each workman had an intimate knowledge of the production methods of almost all the things he used. Under such circumstances he could easily judge poor quality and shoddy workmanship. When each man specialized on only one line of production it became much easier for other workmen to fool him about the quality of products. This tendency toward increased specialization has been carried still further in more recent times, with the result that consumers have become still less able to judge the quality of the merchandise offered for sale.

Third, as towns grew in size and economic importance they secured charters and developed *municipal governments*. It frequently happened that municipal authority was vested in the hands of wealthy burghers or the merchant gild. Under such circumstances municipal power

was in the hands of persons unsympathetic with the rising craft guilds. They frequently tried to control the craftsmen by means of assizes, licenses, or municipal ordinances. Although these measures often benefited the general public, they were not very popular with the craftsmen, who preferred self-regulation to municipal regulation. As a result of this stimulus from the municipal authorities, the craft guilds frequently established their own "ordinances."

2. NATURE: At first the guilds simply set down ordinary rules of honest workmanship. Later they went on to prescribe conditions of work and processes of production. In addition they set up specific rules for the application of such Christian concepts as "just price" to the special circumstances prevailing in each craft. Finally, they regulated the personnel of the craft, established standards of quality, and arranged for the inspection of the products offered for sale.

3. TYPES: These guild ordinances were of four types: First, those regulating productive processes were generally concerned with tool equipment and minimum-quality standards for materials and workmanship. The second consisted of those which regulated working conditions, specified hours of labor, prohibited night work, and established the time for opening and closing the shop. The third group of regulations controlling admission to the trade became more and more elaborate as the guilds grew older until all the conditions surrounding apprenticeship, journeymanhood, and mastership were minutely specified. Finally, the regulations prohibiting forestalling, regrating, and engrossing were typical of the general group concerned with the purchase of material and the sale of the product.

4. EFFECTS: The effects of such a system of formal social controls were obvious. It produced group responsibility on the part of the guild officers and organization for the behavior of individual members. In this respect the guild, as a social unit, resembled the old Anglo-Saxon "frankpledge." Complaints of unfair practices were made to



the gild, which then investigated and disciplined the offender. Competition was distinctly limited and was placed largely upon a quality rather than a price basis. The whole system unquestionably tended to produce a monopoly control over each process and some people regard this as the chief evil of the entire gild system. Any elaborate system of formal social controls always sets up powerful forces favoring the maintenance of the status quo. To this the gild and municipal regulations were no exception. In fact, the system became so inflexible that the changes which took place in the social milieu finally caused its disintegration rather than its modification.

## B. CHRISTIAN CONCEPTS

The organized Church cast its bulky shadow over almost every phase of life. Sometimes its control over thought and behavior was formal and rigid, as was the case in its ecclesiastical courts. But sometimes its influence was subtle and pervasive without being particularly apparent to the people of the time. Its practical monopoly upon the learning and philosophy of the day enabled it to exert great influence upon the prevalent thought patterns and concepts. Two examples, just price and usury, will suffice to illustrate the relation between ecclesiastical thought and economic practices.

1. JUST PRICE: In the medieval world price phenomena were viewed from the point of view of theology and were associated with ideas of ethical justice. The worth of a *person* depended largely upon his class, which was inherited. In like manner, the value of a person's *service* depended upon his social status or the standing of his occupation. Thus the concept of "just" price came to include the concept of a "fixed" price. More than that it meant a price fixed in terms of a customary or traditional standard of living for a definite type of work or class of workmen. Under the static conditions of feudalism changes in price were necessary only when natural phenomena

produced fluctuations in crops. It was exceptionally easy to assume that traditional, customary, or fixed prices were just prices. This was especially true since the prestige of the Church was so great that the faithful in all walks of life generally accepted the judgments handed down by the Church Fathers.

In actual operation just price was perhaps the most powerful social control of urban feudal life. As craft guilds increased in English towns their regulatory powers produced a high degree of equality among the members of each guild. The standard of living of scriveners, cordwainers, or tylers became established as just and proper for the respective craftsmen in each. The price of a product was fixed at a level which, over a period of time, would permit the average master in the guild to live according to the established standard for that type of work. If meat twice a week and a three-roomed house were considered fitting and proper for a cordwainer's family then a price which afforded such items of diet and size of house was considered to be just. The actual price of a given type of boot was the cost of the materials plus an amount which would normally afford the socially approved level of living. Of course, the actual income of cordwainers did vary from time to time and among the individual members of the guild.

An outstanding master employing the maximum number of journeymen allowed by guild rules might easily make an appreciably larger yearly income than the average master in that craft. A mediocre master whose product barely exceeded the minimum standards of his craft would probably not receive sufficient patronage to keep himself and the minimum number of apprentices regularly employed and would, in consequence, not be able to live up to the accepted standard. These cases did not violate the principle of just price so long as their numbers were small as compared to the total craftsmen enjoying a close approximation of the accepted standard. Larger incomes were a reward for exceptional service; lower incomes

stimulated the master to improve his workmanship. Of course the difference between even the highest and lowest incomes of the masters in a given craft was never very great. If \$475 to \$525 be taken as the yearly income of the majority of cordwainers the income of the most efficient master would probably never exceed \$600 or that of the least efficient fall below \$400. This narrow range of income stands in sharp contrast to those received in modern society, especially among the rapidly disappearing small producers, where the range is great and the year-to-year variation is staggering.

Just price became the doctrine by which the guilds justified the fixing of prices for their products at levels adequate for the maintenance of the customary standards of living associated with each type of work. Professor Salin asserts that "the preservation of the medieval class structure was the determining principle of the just price system."

Following the Crusades large sums of precious metals and considerable quantities of new goods began to flow into the West, and the advanced money economy of the Italian commercial cities began to influence the remainder of the European continent and England. The merchant class was rising to a position of dominance and a new wage-earning class was growing up outside the gild system. Under these changing circumstances the Church could no longer avoid the necessity of re-examining the factors which constituted just price.

The first concession to rising commercial practices was made by recognizing that the market price might not coincide with the theoretically determined just price. Antonino of Florence even distinguished between three levels of just price: the lower, the middle, and the upper. The use of credit was appearing and the practice of charging a higher price for articles purchased "on time" was recognized even by the theologians. Some of them suggested that if the middle level of just price was charged for cash transactions, the upper level might legitimately be charged for credit

transactions. Another concession was made when it was observed that the scarcity of an article and the risk involved in its production and sale should be included in the determination of its just price. A third concession was made when "industry" was recognized as a legitimate factor to be included in price. Under this circumstance the industry, creative activity, or zeal of a merchant could be made to justify a commercial profit.

Thus by a long series of modifications and extensions of the concept the original idea of a fixed, ethical, just price was made to conform to the requirements of an expanding, profit-motivated, capitalistic society operating with money and credit. The Church had abandoned its effort to save the economic and social system of the middle ages and had surrendered to the inevitability of changed economic conditions and circumstances. The doctrine of just price ceased to have any validity and became of interest only to antiquarians, although there are some who wonder whether such attempts as the short-lived N.R.A. may forecast the use of some modern form of "just price" regulation to mitigate the evils of unrestrained competition.

2. **USURY:** The second example of the way in which ecclesiastical thought came into contact with economic practices has a history fully as important and as illuminating as that just cited. The term "usury" was used to apply to any return upon money. Under this concept adding 1 per cent to the principal of a loan was just as bad as adding 50 per cent. Charging interest was no mere violation of a civil ordinance; it was a mortal sin which the Church might punish by excommunicating the offender. Thus, all interest was called usury and was strictly prohibited.

The medieval theologians pointed out that time was divine; no human could either stop its passage or increase its amount. Since time was the free gift of God to all men alike it could command no price and a loan was regarded as a sort of delayed exchange in which the amount given and that returned must be equivalent.

Strange as such a doctrine may sound to modern ears it was considerably more plausible during the early middle ages when it was promulgated than might at first appear. The period was one of little trade, scarce money, and practically no "business opportunities." Under such circumstances most loans were made to persons in distress who needed the loan not for business expansion, investment, speculation, or other profit-seeking ventures but for consumption purposes. Taking advantage of a person in distress who needed funds (or goods) for immediate necessities was regarded as something less than Christian brotherliness. It was, perhaps, evidence of a lost soul. In the "other-worldly" atmosphere of medieval Christendom the "next life" seemed nearer and more real than in the materialism of a capitalistic society. The salvation of the soul seemed more important to those who lived in the shadow of a medieval cathedral than it does to the millions who swarm about the base of the Empire State building.

### C. RELIGION

The general and intangible aspects of religion itself, as well as the formal ecclesiastical laws directly affecting the economic world, constituted a notable social control. There is an old saying to the effect that the thought is father to the deed. Similarly, as the organized Church and a religious environment tended to give men a particular point of view or habit of thought it tended also to condition and mold their actions and reactions. In this sense the formal services affected their lives less vitally than the other phases of religion. The parish church constituted the social and intellectual center of town life. There people met and exchanged the news and the gossip of the day; there young women met and attracted their future husbands; there young men met and deceived their future wives; there festivals and pageants added new zest and meaning to life; there people discussed their daily occupations, their life's work, and the interesting aspects of theology and philos-

ophy; there in the shadow of the church, under the influence of religion, and often in the terms of theology the myriad contacts of a social group took place. In every major crisis of the individual's life the Church was represented by an official who solemnized the occasion with an impressive ceremony. At birth, christening, marriage, and death the individual was within the circle of the omnipresent influence of religion.

#### D. EDUCATION

Since those attitudes acquired during youth frequently mold the behavior patterns of adult life, the educational forms and institutions of any society constitute one of its most important social controls. The medieval period was no exception, although it possessed no public schools. There were three principal forms of education: vocational, religious, and literary. Of these, only one, *vocational* education, was not under the influence of the Church. It was exclusively in the hands of the guilds through the institution of apprenticeship, already described. The training was informal and practical, involving manual manipulation rather than mental processes or literary skill although some general attitudes were acquired in the household of the master. Due to the general illiteracy the principal method of instruction was by example and imitation. In the *religious* field pageants, ceremonies, festivals, and mystery plays were used in addition to the spoken word to impart the great Biblical stories and truths to the multitudes who could not read.

*Literary* education was quite rare. Few persons other than the nobles and higher clergy were able to read and write. This was due, in part at least, to the almost complete monopoly of literary education by the Church. For centuries the cathedral schools and the monasteries were almost the only centers of literary knowledge and skill. Books were rare and costly, since they had to be written by hand on expensive and bulky parchment. In addition the language of the scholar was apt to be Latin rather than the common

language of everyday speech. It was not until after the introduction of printing in the late fifteenth century that it was technically possible to bring a knowledge of reading and writing to the mass of the people. The commercial practicability of paper making and the invention of movable type unlocked the door leading to general literacy and placed religious and secular documents within the reach of the general populace. It was significant that the Bible and a Latin grammar were the first manuscripts to be set up in print. These two works symbolized the theological wisdom and the secular learning of the age while their printed form forecast the new era soon to be ushered in by the Renaissance.

### E. ATTITUDES

The conditions and events of the world probably never appear exactly alike to any two persons. Each individual who views any given event finds it colored by his own attitudes. He apprehends it from his own peculiar point of view and sees it against the background of his own previous experiences. The attitudes held by each person are like colored spectacles, which give their characteristic tint to everything viewed through them. A white light viewed through red glasses will seem to be a "stop" signal, while the same light viewed by another person through green glasses will appear to be a "go" signal. In the same way individuals with varying attitudes will react quite differently to the same social situation. Consequently attitudes are one of the major informal social controls in any society.

Although the totality of the attitudes held by each individual differs from the totality of the attitudes held by every other individual, there are certain ones which are held by such a large percentage of persons that they are correctly regarded as dominant for the group. These exert a powerful influence upon the behavior patterns and institutions of the culture. At least three such dominant group attitudes stand out prominently in urban feudalism.

1. **GROUP WELFARE:** The lack of individualism which characterized manorial economy was only slightly less evident in town society. Individual advantage was consistently subordinated to the interests of some larger group. The teachings of the Church concerning the social duties of a Christian, its regulations on usury and just price, the emphasis of the gild ordinances upon honest workmanship and fairness to fellow craftsmen and the buying public—all these could exist only in a society in which the general attitude was sympathetic toward the concept of group welfare and in which the individual believed it his duty to make personal sacrifices in the interest of some larger good. When this attitude began to break down, the Church and gild regulations also began to undergo modifications, until an individualistic society based upon the *laissez-faire* concept took its place and produced a system so anarchistic that it might well have taken as its motto the piratical slogan, "Every man for himself and the devil take the hindmost."

2. **PROVINCIALISM:** From the primordial cultures of Paleolithic and Neolithic times the medieval town received its heritage of provincial attitudes. Like its predecessors, feudalism exhibited that curious duality of behavior norms already described under the terms in-group (intra-group) and out-group (extra-group) morality. All the desirable qualities and virtues were included in the intra-group morality and were expected of an individual in his dealings with his fellow townsmen. But persons from outside the town were regarded not merely as strangers but also as foreigners. They were objects of suspicion and distrust and were denied the privileges enjoyed by citizens. They were required to pay a fee before they might trade and even then they were restricted to certain types of commodities. The townsmen were not averse to sharp bargaining and even direct misrepresentation in their efforts to "get the best of" a foreign merchant or trader. Perhaps one of the surest signs of provincialism is the habit of



thought which regards the customs, peculiarities of speech, and manner of dress current in one's own group as right while all others are regarded as strange or definitely wrong. Contacts with other groups tend to destroy such provincialism.

3. CRAFTSMANSHIP: The chief incentive impelling the urban artisan to produce goods of high quality was a pride in his work. He was engaged in a creative activity the very performance of which was its own partial reward. With a deft touch his skilled hands were turning out goods that were his own in a peculiar and satisfying way for they bore the imprint of his personality. He accepted the responsibility for their defects and claimed the praise for their merits. It mattered little whether the article was a saddle, a pair of shoes, or a piece of cloth, the workman took pride in the excellence of the finished product and carefully guarded his reputation as a craftsman. Many undoubtedly took the Biblical passage very literally in which it is recorded that a good name is more to be desired than great riches. Such medieval craftsmen were as earnest in the pursuit of a good reputation as many modern businessmen are in the pursuit of wealth. This attitude of mind which stressed the importance of excellent workmanship and honest craftsmanship was a product of the economic system in which it flourished and was thoroughly consistent with the general social milieu of the culture.

In modern industrialism the purpose of business is profit, and quality of merchandise is sacrificed whenever such a plan promotes the successful pursuit of gain. In business, craftsmanship and pride of workmanship are now secondary considerations. However in certain non-business-like fields there are modern counterparts of the medieval creative activity, and pride in workmanship is still to be found. The most obvious, as well as the most important of these fields, is science. The scientist, like the medieval craftsman, is engaged in a creative activity, the successful performance of which is its own partial reward. Scientists also regard a

good name as an exceptionally valuable possession. They carefully guard a reputation for impartiality, objectivity, and excellent workmanship. They seldom accumulate much wealth. Indeed, the professional ethics of the scientists in the field of medicine prevent them from taking out patents on their inventions and discoveries. They thus sacrifice individual gain in the interest of the larger social good.

#### IV. THE SOCIAL PROCESS

The physical environment and the institutional structure are important largely because they provide the milieu within which the actual occurrences of life take place, and because this milieu affects and molds the daily routine of happenings and sets limits to the types of relationships and human behavior patterns which can exist at any particular period. But the social process, which goes on within the milieu, in turn conditions and alters the institutional structure itself. Thus the social milieu and the social process are mutually interacting phases of every culture.

##### A. OCCUPATIONS

There are two principal features of the social process: the daily occupations of the population, and the social relations existing between the individuals and groups of which society is composed. In the period of urban feudalism the various crafts constituted the occupations of the vast majority of the male population. Each of the town handicrafts had its own peculiar processes and techniques and its own specialized tools and equipment. The dominant and most typical handicrafts were embodied within the guild organization and for this reason the following list of typical guilds will present a reasonably adequate picture of the various handicrafts constituting the economic basis of urban feudalism.

*Bowyers*—Makers of bows

*Brasiers*—Workers in brass, especially cast objects

*Broderers*—Embroiderers and decorators of cloth, especially clothes  
*Burillers*—Removers of knots and imperfections in cloth  
*Cappers*—Makers of caps, especially small caps worn under helmets  
*Chandlers*—Candle makers, particularly tallow types  
*Coopers*—Makers of barrels (wet, dry, and white)  
*Cordwainers*—Shoemakers; workers in cordovan leather  
*Couchers*—Upholsterers and furniture repairmen  
*Curriers*—Leather dressers (chiefly removers of hair)  
*Cutlers*—Makers and sharpeners of knives  
*Dubbers*—Dressers of leather (with starch and oil)  
*Farriers*—Horseshoers and ironworkers  
*Fletchers*—Arrow makers; persons who attach feathers to arrows  
*Fullers*—Dressers of cloth (thickening cloth by steaming and starching)  
*Furbishers*—Finishers of armor (polishing and cleaning)  
*Girdlers*—Makers of girdles and small objects to attach to girdles  
*Glaziers*—Makers of glassware; assemblers of stained-glass windows  
*Heaumers*—Helmet makers, especially the “great helmets” for knights  
*Horners*—Workers in horn; makers of horn implements and ornaments  
*Littesters*—Dyers, especially of fine fabrics (cottons and linens)  
*Lattenmakers*—Workers in brass, especially hammered types  
*Lorimers*—Makers of saddles and bridles, also bits and metal parts  
*Pargettors*—Decorators of plaster (frescoes and relief designs)  
*Pattonmakers*—Makers of platform shoes for crossing muddy streets  
*Paviors*—Layers of brick and stone on flat surfaces  
*Pinners*—Makers of pins (plain and decorative)  
*Planers*—Makers of arms and instruments with keen edges  
*Pursers*—Makers of purses, especially leather and beaded  
*Sawyers*—Carpenters, especially rough work.  
*Scriveners*—Penmen; document (legal) writers  
*Spurriers*—Makers of spurs and riding accoutrements  
*Stringers*—Makers of bow strings  
*Spurgeons*—Purifiers of spiritous liquors  
*Tapissers*—Weavers of figured cloth and tapestry  
*Tawyers*—Bleachers of leather, especially for gloves and parchments  
*Turners*—Book decorators and finishers  
*Tylers*—Makers and layers of tile, especially roofers  
*Wheelwrights*—Makers and repairers of wheels

In addition there were a number of specialized occupations which claimed the attention and services of a relatively small proportion of the people. Administration of the town governments fell into the hands of professional politicians. The older masters ruled the craft guilds and

the higher clergy managed Church affairs. Vocational education constituted only a part-time function of the master craftsmen, religious education was the duty of the clergy, and chivalric education constituted one of the functions of the higher nobility. Merchandising was for some only a function of mastership in a gild but for middlemen, who were relatively few in number, it was a full-time employment. The women, of course, bore the heavy responsibilities of homemaking and child rearing. Nevertheless, the craftsmen overshadowed all others owing to sheer numerical superiority.

## B. SOCIAL RELATIONS

1. LIVING CONDITIONS: Since there was little vehicular traffic it is not surprising that the streets of the towns were narrow, unpaved, and unlighted. The population was not sufficiently large in most towns to force social cooperation in the disposal of sewage, which usually drained into a ditch along the side of the street, where pools of stagnant rain water and heaps of refuse abounded. It is probable that this condition caused noble gentlemen to use a carriage whenever they wished to escort a lady to some social engagement. If forced to walk the thoughtful gentleman probably took the side of the walk nearest the open street in order to reduce the chance of his lady's being splashed by a passing animal or carriage.

The houses of the time were constructed of timber and plaster. Fires were common and particularly destructive in the crowded sections. The average home was a sort of combination dwelling and business house. The front part was devoted to a shop where the craftsman did his work and sold his produce to the public while the back provided living quarters for the family. These rooms were furnished with pallets for sleeping and crude tables, stools, and benches to facilitate the performance of daytime tasks. Chairs were regarded as a luxury, and furniture of all kinds was scarce.

Disease was all too common because of overcrowding. As the towns grew larger the population still attempted to stay within the walls. This intensified the problems of water supply and sewage disposal. Medical science and sanitation were unknown, as were also the causes of the various common diseases and their methods of communication. One needed a rugged constitution not only to resist disease but also to withstand the rigors of life in a house having neither glass windowpanes, a central heating system, nor running water.

2. **DRESS:** Under such conditions the warm, simple, and durable clothes of the craftsmen were necessary as well as practical. Leather jerkins were much in evidence. Shoes were heavy and clumsy, but durable. Homespun linens and woolens were widely used but cotton was a luxury worn only by the wealthy, who could afford to pay the high prices demanded for imported goods. Indeed, clothes offered one of the best opportunities for ostentatious display by both the men and the women of the upper class, who were reputable by birth and wealthy through the possession of productive estates. Large sums were spent by both sexes upon costly velvets, silks, and laces from the Orient. The use of various textiles, silver buckles, gold braid, and other ornaments came and went with the fashions and fads of the wealthy. Their women occupied themselves with making tapestries and fine embroideries but the women of the poor craftsmen occupied themselves with mending warm clothes and with a hundred other necessary household tasks.

3. **FOOD:** Both eating and drinking were indulged in to excess. For the common man food and liquor constituted one of the few pleasures of daily life. For the wealthy, drinking and feasting constituted an elite way to spend their surplus of idle time. Fasting merely involved a change from meat to fish and entailed little hardship, although it stimulated the fisheries of the North and Baltic seas. Methods of food preservation were crude, consisting

of salting, sun-drying, and smoking fish and meat. Methods of preserving vegetables and fruits were practically unknown. Owing to the general monotony of diet, spices of all kinds were highly prized but being largely imported from the Orient were not widely used except among the nobility and clergy.

4. RECREATIONS: Perhaps it is fortunate that there were an unusually large number of holidays on which mystery plays, festivals, celebrations, and fairs broke the monotony of the daily tasks. Folk dancing, community sports, and singing contests enlivened these festive occasions. Professional entertainers were always on hand to add their services to the general carnival spirit. Minstrels, singing their songs, vied with each other for the plaudits of the crowd. Jugglers and tumblers performed their feats of skill and strength and were greatly admired, especially by the young ladies. Sleight-of-hand performers exhibited their apparent miracles to the complete mystification of all and the satisfaction of none. Sharpers fleeced those who were inclined to gamble at games of chance and pickpockets enriched themselves while lightening the burdens of their victims. From distant places newsmongers brought astounding tales which made up for what they lacked in veracity by an abundance of colorful and exciting detail. Although the recreations were simple and inexpensive they probably brought just as vivid feelings of pleasure to the folk who participated in them as the elaborate and costly commercial amusements give to blasé moderns who thus seek to stimulate their jaded sensibilities.

## V. FACTORS FOR CHANGE

The static and carefully regulated system of urban feudalism served the needs of its own period very well but it could not withstand the cumulative impact of new forces which were gathering like thunder clouds upon the horizon of the future. The fervor of the Crusades drove frenzied masses of population across the face of Europe, bringing

them into contact with new ideas, different institutions, and strange ways. The Renaissance and Reformation ripped aside the veil which had hidden classical literature and revealed the learning and wisdom of the ancients to an astounded world. The commercial revolution transformed the methods of transportation and more than doubled the size of the "known world." These new forces produced a new social class, the bourgeoisie, which derived its wealth from the new commerce and disrupted the old social order by its rise to a position of influence and power.

The commercial aspects of feudalism produced the forces which developed the stresses and strains in the supporting framework of manors and towns. At first slowly and then with steadily increasing speed those who found opportunity in a changing world wrecked the old structure and built a more dynamic pattern on its ruins. Commerce was the sphere where the forces of change took shape. This culturally significant aspect of feudalism is the subject of the next chapter.

### STUDY QUESTIONS

1. List the chief reasons for the rise of towns. How did the rise of towns affect life of the manor?
2. Explain why craft guilds were the result partly of spontaneous and partly of compulsory forces. How did the growth of town population aid the development of craft guilds? Distinguish the merchant guild from the craft guild as to origin and purpose. Explain the statement: "The guild system was in a constant state of growth and decay."
3. Discuss the (a) regulatory, (b) welfare, and (c) religious functions of the craft guilds.
4. Briefly discuss each of the following under the guild system:
  - a. Industrial enterprise vs. guild rules and regulations.
  - b. Relation of producers and consumers.
  - c. Scale of production and extent of the market.
  - d. Wages, prices, quality.
5. Explain the rise, significance, and decline of the doctrine of "just price." Of "usury." Compare these two concepts.
6. By what mechanism was the policy of "just price and wages" regulated? Explain: forestalling, regrating, engrossing. Why were they prohibited by guild rules? In what types of production did the

gild system predominate? Contrast the merits and defects of the gild system of production.

7. What is meant by the welfare point of view? Give three examples from medieval times. Of what significance is the statement: "The spirit of medieval times was livelihood while that of modern times is gain"?
8. Enumerate the chief general and specific causes for the decline of the gilds. What, if anything, arose to take the place of the gilds?
9. Compare a craft gild with a modern trade union. In making your comparison consider the following factors: types of organization, purposes of the group, functions performed, and methods used.
10. List the chief features of the gild system. Which ones are still to be found in our present culture? Which served as foundations upon which present practices have been built? Evaluate the effectiveness with which the gild system served the purposes of the people of its day.

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## *Chapter Six*

# Commercial Feudalism

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### I. ROLE OF TRADE IN FEUDALISM

The pervasive aspects of feudalism were *status* and *service*. The manor and the gild were the nuclei of a great culture which had stability and resistance to change as its dominant characteristics. The great Church was the central government which recognized no lay boundaries and which supplied the ideology of the entire feudal pattern. The duty of every child born into this culture was to fill a predetermined place in society by serving some lord or master in such a way as to prove his worthiness to graduate into the everlasting life of an ordered heaven. The motive, therefore, was not acquisition or worldly gain but salvation in return for service and devotion. In such a stratified and custom-dominated culture one might easily suppose that change was impossible. To the average man of the day change was something to be abhorred, since it might not only rob him of his meager subsistence but also destroy his chances of gaining the ultimate reward of celestial happiness. But, solid as was the structure of feudalism, there were certain forces which, within the space of two centuries, undermined its chief institutions and laid the basis for a new world culture. In certain small centers were groups of people who had no "authentic" place in the great feudal complex and who sought to gain a living by supply-

ing the rare commodities which the priests and nobles desired but which only the "outside world" provided. This trickle of trade presently grew into a flood which swept away a great social system and ushered in one of mightier proportions.

### A. REASONS FOR MEAGER TRADE

Feudalism was fundamentally a series of self-sufficient groups in which the control classes obtained their wealth by exploiting the land and the underlying population. Custom, an attitude of "otherworldliness," and the Church control of the everyday life of all classes created an atmosphere in which trade was looked upon as a necessary evil rather than as a means of acquiring a better material basis of living. In general the specific forces affecting trade grew out of the social, economic, and physical conditions of the day.

1. THE SOCIAL ORGANIZATION of feudalism, particularly in England, made an extensive trade impossible. To begin with, the major part of the population consisted of manorial tenants, who produced, within the confines of each manor, the necessities of life (food, shelter, and clothing) and who neither desired nor had the means of acquiring the simplest luxuries. The lords and freemen, especially knights, did require some goods which the manor could not produce. They could offer in exchange the small exportable surpluses obtained from their tenants as feudal dues or grown on the manorial demesne land. Another means of acquiring "foreign" goods was the well-established one of feudal pillage, called warfare. The possibilities here were limited by the amount of such goods in the immediate vicinity. The ultimate source was barter or trade. Two facts kept the upper manorial classes from greatly influencing the amount of inter-regional trade. First, they contained an extremely limited number of persons, probably not more than 5 per cent of the population. Secondly, many of their demands for luxury goods, such as fine clothes and furniture, were satisfied by the guilds of near-by towns.

The guilds themselves comprised another important reason for the meagerness of medieval trade. The towns of England, as well as of Flanders and much of central Europe, were under the control of guilds. As craft guilds increased in number and membership the established policy of protecting their monopolies prevailed. Foreign merchants were either excluded from the town, forced to sell their goods to guildsmen, or required to submit to definite and hampering guild restrictions. Ordinarily the importation of raw materials to be worked up by the various guilds was encouraged, but finished consumer goods were banned. The guilds were organized on strictly local lines and emphasized town rather than national welfare. Considerable numbers of apprentices and journeymen, as well as masters, constituted the list of those whose economic interests were supposedly jeopardized by foreign trade. As we shall see later this widespread system of local guilds was one of the chief reasons for the periodic fairs, where foreign merchants could trade on equal terms with craftsmen.

The self-sufficiency of the manor and the monopolies of the guild-controlled town were only the local aspects of the self-sufficiency of England as a whole. England as a region had little to offer in exchange for the items brought to her shores by a few daring merchants. Wool, woolfells (sheepskins with the uncut wool attached), tin, and some lumber were the only surplus staples which the region could offer. Even these were available in raw form only because of the relative backwardness of English industry as compared with that of Flemish and Baltic sea towns. The dearth of manufacturing skill, available capital, and commercial enterprise was particularly acute. Such craftsmanship as prevailed in England was controlled by town guilds which produced for a local market and frowned upon exports as well as upon imports. Furthermore, the guild policy was designed to promote equality of opportunity for members.

Individual initiative and enterprise were repressed in the interest of the collective welfare of brother craftsmen and consumers. In sharp contrast were conditions on the Continent, especially in those towns controlled by the Hanseatic League. We shall see that the gild system there was always dominated by the great merchants, who favored the production of a large stock of a few commodities for a foreign market. In skill, capital, and enterprise the northern European towns surpassed those of England.

The presence of powerful merchants in the Baltic Sea and Mediterranean regions accounts for most of the trade which existed in feudal Europe. But these same merchants were also a factor in explaining the meagerness of English trade. The rise of the central government in England with its king and attending court, together with the chartered towns under gild control, created a situation which made England very passive in foreign trade. The Hanseatic League and Venetian Fleet paid the English Crown princely revenues for trading privileges. Largely because of this no aggressive native merchant class appeared in England until the fourteenth century (the Merchant Adventurers), when foreign trade had grown to significant proportions. Many other factors were significant in explaining the comparative meagerness of medieval trade.

2. THE ECONOMIC HINDRANCES centered around revenues and a medium of exchange. Since feudal dues were customary and designed to exact everything above subsistence from the underlying population it seemed only natural for feudal lords to view the movement of goods through their territories as another source of income. *Feudal tolls* were numerous and levied upon the principle of charging all the traffic would bear. Since roads were few and uncertain, rivers and seacoasts were the main arteries. Tolls were levied at all ports and along rivers wherever they flowed from one manor or principality into another. Sometimes these tolls were more damaging to trade than natural hazards.

Even more pervasive was the character of *medieval currency*. Such money as existed consisted of a few classical coins and those issued by the feudal lords, who claimed the right to mint coins and abused it wantonly in an effort to bolster their revenues. One of the worst practices was debasement, which consisted of increasing the alloy (base metal) and reducing the gold or silver content of the coin without changing its size or face denomination. Since all "subjects" of the issuing lord had to accept the coins at their face value it meant an increase in the amount of goods which the lord could purchase from his tenants. But outside his domain the coins were accepted only at the value of their specie content so that they represented at best a fluctuating standard of value. Even the coins of known gold content issued by the Church or larger commercial city-states such as Venice, Florence, and Genoa were subjected to numerous devaluations. Counterfeiting was the most common method of profiting from the reputation of the better currencies. But even the genuine coins suffered "clipping" and "sweating" as they passed along the channels of trade. Clipping consisted of removing a small amount of metal by filing the edges or the faces of a coin. Sweating was a similar process but consisted of shaking a number of coins in a box or bag to remove particles of the metal. To an individual receiving few coins a year these methods were unprofitable and impracticable. But when used consistently by a person handling thousands of coins per year, such as a merchant or money changer, they offered a lucrative means of augmenting his income. The gold and silver particles could be sold as "dust" or cast into bars and sold to jewelers and other precious-metal workers. Of course, the original coins diminished in physical size and then in face value as they passed through the channels of medieval trade. Since the value of a coin depended upon its physical weight in inter-regional trade, medieval coins fluctuated greatly in value.

All these conditions made the occupation of money evaluation and money changing a necessary and profitable one. Just as some manufacturers of today take advantage of the ignorance of the consumer and inveigle the buyer into accepting a shoddy substitute for the genuine article so the medieval money changers overlooked no opportunity to get the best of the bargain. At best, money changing was a legitimate business function; at worst, it was a gambler's art in which the stakes were high enough to warrant the risks involved.

3. THE PHYSICAL HINDRANCES to medieval trade were partly social and partly natural. Transportation facilities were grossly inadequate. Roads were few in number, and in poor condition. They usually could not be traversed in a wheeled vehicle and were frequently impassable in any fashion during the rainy season. The highways were infested with robbers whose exactions were little more onerous than the tolls. In fact, the lord sometimes hired thugs to waylay the traveler and seize what he had been unable to obtain as toll. The rivers offered much more reliable inland highways but these too were far from satisfactory. Most English streams froze over in the winter, possessed rapids in their upper stretches, and were constantly menaced by the pillaging activities of pirates and tolls leviers.

The conditions of sea travel offered some improvement but navigation techniques were so crude and undeveloped that the prevailing practice was to follow the coastline. In small unseaworthy ships the merchants were easy prey to the rocks of uncharted passages or the pirates of rugged coasts. When viewed in the light of longer voyages, such as those made by Hanseatic ships from the Baltic Sea to England or by the Venetians from the Levant through the Mediterranean and up the west coast of Europe to Flanders and England, the seamanship was something to marvel at. Such physiographic knowledge as existed was the "stock in trade" of these extra-feudal classes, the merchants and



travelers. Without maps and with the crudest of position-reckoning instruments they made voyages comparable to those of Byrd in our own day. It is to a study of the activities of these extra-feudal classes and of their effects upon the cultural pattern of feudalism that we must now turn.

## II. LOCAL (PETTY) TRADE

Such trade as was carried on between feudal towns and the surrounding manors occurred in *markets*. In England these markets date back to Anglo-Saxon times, when the law of the land required a witness to all sales. Their growth had been aided by religious celebrations when barter was an adjunct of the spiritual activities and by the assembly of wealthy tenants in towns to pay royal taxes and tolls. But the major element in the growth of English markets was the dominant position of the gild organization in chartered towns. The gild monopoly of local trade, the fear of aliens (anyone not residing in the immediate community), and the rules under which all craftsmen were required to buy their stocks of raw materials all conduced to the market system of trading.

Markets were usually held weekly or bimonthly in the square of the town. Here the representatives of the manorial lords, the wealthier freemen, and the villeins came to sell such surplus staples or perishable produce as they might have. The whole market place was under the surveillance of the town authorities and no one was permitted to negotiate a trade or sale before the opening or after the closing time. As we have seen, severe penalties were imposed upon any gildsman attempting to make an irregular deal for his private gain (forestalling, regrating, and engrossing). Trade was principally barter though often made in terms of the currency of that town or feudal division. The chief commodities sold were basic raw materials used by the *gilds*, such as wool, leather, tin, lumber, and grain; perishable produce, especially foodstuffs in the form of vegetables, meat, and fowls; and overseas products used by the fine-

arts craftsmen, such as gold, silver, copper, lead, jewels, and cutlery steel. Of course the finished products of the craft guilds were sold or exchanged for the "imports." These consisted in the main of necessities, such as leather boots, leggings, jerkins; woven and knit goods; some of the expendible articles required in the practice of chivalry such as mail, helmet caps, harnesses, bridles, and spurs; some articles for the manor houses in the form of cooking utensils and furniture; as well as rings, laces, and a few other items of personal adornment. However, the finer type of goods used in ostentatious display by the upper classes were more often procured at the larger fairs, where the selections were greater and the quality better. Markets were essentially connecting links between the gild-regulated towns and the upper classes of the surrounding country.

### III. INTER-REGIONAL (GRAND) TRADE

Compared to modern times the volume of trade between different parts of Europe and between Europe and the Orient was infinitesimal. However, such trade did exist and in certain centers attained considerable volume. Compared to the amount of goods sold in the numerous petty markets this trade was meager, but when the value or even the physical bulk of goods sold by one of the several associations of merchants or in one of the great fairs is compared with the value or bulk of those sold in even the largest market the ratio changes in favor of inter-regional rather than local trade. The term "inter-regional" is used rather than international, foreign, or some other more usual and modern one. In the first place there were no nations. Modern nations emerged out of the forces set in motion by the inter-regional trade which we are here discussing, but not until the late sixteenth century could the term be used in anything like its modern meaning. The term "foreign" is also avoided because in medieval times it meant any thing or person outside of the immediate vicinity

and not merely those beyond a national boundary or from overseas. A merchant from London was just as much a foreigner to a person living in Canterbury, some 60 miles away, as a merchant from Hamburg or Venice. The terms "inter-regional" and "grand" are used in this chapter to distinguish all trade over considerable distances from the local or petty trade of the town and market place.

Economically, the Crusades laid the basis for inter-regional trade on a grand scale. Not only did they open new channels for Saracen and Oriental commodities but, what is more important, they developed a market for these among the upper classes of Europe. The fairs, the Hanseatic League, and all the minor organizations of medieval trade grew out of the forces which the Crusades set in motion. They more than any other single factor fed the trickle of trade until it became the devastating flood that washed away the structure of feudalism and turned men's minds from salvation in another world to the conquest and exploitation of this one.

## A. THE CRUSADES

1. NATURE: Strictly speaking the Crusades were feudal armies sent by the Church against the Moslems for the purpose of recovering regions especially significant in the early development of Christianity. But from a social and economic point of view the Crusades were merely the union and intensification of many forces generated within the great feudal system. From a standpoint of origins they began with the rise of the Church as a temporal power and the spread of feudalism as a way of life. In their execution they were fed from the gain spirit of the early bourgeois classes in the Italian city-states. But in their consequences lie their greatest contributions to cultural evolution. Not only did they undermine and eventually destroy feudalism but they saved for and brought into western Europe many of the traits most significant in the development of the modern scientific point of view.

2. CAUSES: Almost every feature of feudalism contributed something to the Crusades. In general, the contributing forces were of three types:

a. THE POLITICAL AND SOCIAL FORCES *set the stage* for the actual crusading armies. From the last days of the Roman empire, waves of Teutonic conquerors had swept over western Europe. The Norman conquests of the eleventh century seemed but a resumption of the Norsemen raids which established Normandy along the lower Seine during the ninth century. Culminating a half century of mercenary and feudal fighting, two Norman leaders, Richard and Robert Guiscard, in 1060 became the feudal overlords of two former Byzantine provinces in southern Italy. Little did the Pope sense the importance of his act when he confirmed their conquests and received their homage. The populous and rich Saracen island of Sicily became the next objective of the Normans, who cared little about the religion of their victims. With the aid and sanction of the Papacy, all Sicily became a Norman prize by 1086. Even before the completion of this conquest the Normans sought new objectives. To the north lay the rich papal sees while across the Straits of Otranto the civil chaos of the Byzantine provinces invited a conquering army. With the example of William's conquest of England to spur them on, the Norman leaders became increasingly bold. Partly as self-protection against his Norman vassals and partly as a phase of his policy toward the estranged Greek Church, the Pope urged a Norman advance eastward. In 1082 Robert Guiscard and his son Boemund began Byzantine conquests which forced the new Emperor Alexius Comnenus to give the Venetians vast trade concessions in Constantinople in return for their attack upon the Norman flank. The Normans became dangerous political hornets among the major powers of the Mediterranean.

The Church as a great feudal power found itself in the eleventh century threatened on many fronts. Even before the Normans had become dangerous allies in southern

Italy, they had caused the Pope no little trouble in northern Europe. Norman conquests into England and eastward toward the decaying Holy Roman Empire had not only cut off much papal revenue but threatened the political power of the Church by intensifying the investiture struggle. Further, northern Europe was overrun with bands of knightly warriors which needed only a sufficiently unscrupulous leader to turn them against the rich domains of the badly harassed Church. Some common objective to divert the attention of these poorly controlled gangs became ever more necessary as the eleventh century unfolded. From the east the Church suffered another reverse. In 1054 the Pope and the Patriarch of Constantinople had mutually excommunicated each other. At first viewed as merely another in the long series of schisms between the eastern and western branches, the breach failed to heal and seriously impaired the unity of the Church and the leadership of the Pope at a time when the frontiers of Christendom were suffering renewed attacks from the Moslems.

For more than three centuries the Moslems had been little more than annoying heretics along the fringes of Christian Europe. In Spain and in Asia Minor the skirmish lines of the two religions remained more or less fixed. The southern shore and the islands of the Mediterranean were largely Moslem strongholds. Here the rich and cultured civilization of the Saracens became the trade objectives of both Italian and Byzantine merchants. Such conflicts as occurred here were economic rather than religious. But in the eleventh century the Moslem world rose to new unity and expansion under the Seljuk Turks. The many Moslem provinces were only nominally under the Caliph of Bagdad. The emirs, or governors of the provinces, were more interested in the development of a luxurious civilization than in civil or religious unity. The Moors, Egyptians, Arabs, and Persians developed cultural centers with considerable variations of Moslem orthodoxy. Under Seljuk

and his successors, however, the anarchy which had prevailed at the Moslem capital for more than two centuries came to an end in 1055. With Persia and Arabia under their control the Seljuks moved into Syria, where the military opposition of the Fatimite Egyptians made expansion into Christian Asia Minor the easiest policy. Here the decadent condition of the Byzantine empire enabled them to make such advances as to alarm the Papacy and thus to supply one more cause for the Crusades.

While the Seljuks were making themselves masters of the eastern divisions of the Moslem empire another group was gaining control of the western provinces. From 1062-1084 Yusuf brought all of northwestern Africa under the control of his fanatical followers, the Almoravides. Across the straits of Gibraltar the Moslem emir found his province threatened by the attacks of the Christian army under Alphonso. Without support from Bagdad the emir enlisted the aid of Yusuf. In 1086 the combined Moslem forces routed the Christians at Zallaca and began the conquest which within a few years placed two-thirds of the Iberian peninsula under Moslem rule. European invasion was now looming in the southwest. The stage had been set.

b. RELIGIOUS FACTORS very largely *determined the form* of the Crusades. Pilgrimages were common to many religions and had been extensively practiced for centuries by Christians. These grew out of certain beliefs and practices. At hallowed places prayers and devotion became especially efficacious. This power came from the relics and artifacts associated with the life of Christ and his Apostles so that the objective of many pilgrimages was to reclaim the relics and to make them more accessible. Arduous journeys often constituted part of the penance by which the wicked gained absolution from their sins. Begging one's way through a strange and often hostile country in an age when all travel was difficult was indeed a real act of penance. But all roads to shrines were not unbroken stretches of danger and hard-

ship. The hospitality of the monasteries located at strategic places, such as the Saint Bernard pass, did much to lighten the ordeal. This and the protection from feudal pillage which the prestige of the Church afforded its servants often caused merchants to assume the garb of monks or pilgrims. Then too, the social position which a returned pilgrim enjoyed among his less able or fortunate brothers often supplied a powerful stimulus. By the early eleventh century pilgrims to the more distant shrines, especially Jerusalem, began to travel in considerable bands, well armed, and led by members of the higher nobility or clergy. Religious expeditions numbering as many as 7,000 had been led by the Count of Anjou, the Count of Flanders, or the Duke of Normandy. Such groups not only popularized the practice but also stimulated the first Crusade by bringing back tales of ill treatment at the hands of the new Turkish rulers in Syria after 1081.

c. ECONOMIC FORCES played a minor role in launching the Crusades but a major one in their *success and continuation*. By the eleventh century the Christian share of the rich and growing trade among the Saracen islands of the Mediterranean and between the eastern and western divisions of the Moslem empire had fallen into the hands of three maritime powers: Venice at the head of the Adriatic and Genoa and her ally Pisa on the northwestern coast. The alliance of Venice with the heretical Byzantine emperor and against the Pope's allies, the Normans, placed her in a none too favorable position. Her great part in the Crusades came late and largely in defiance of the Church or through conquest of the concessions won by her Church-supported rival.

Genoa's alliance with the Church and her attack upon the Saracens grew not out of her religious enthusiasm but from her commercial greed. Her activity began in 1004, when the Pope, annoyed by the possession of Saracen strongholds almost at his front door, promised the island of Sardinia to any Christian power which would conquer it.

Genoa and Pisa had both been pillaged by Saracen corsairs from Sardinia shortly before and were eager to accept the offer. The prize offered real resistance and not until 1050 was the conquest complete. Again in 1087 the two commercial centers joined with the Pope and sent a fleet against the Moslem stronghold at Tunis. In addition to the payment of indemnity and the release of all Christian prisoners, the defeated Moslems agreed to admit all goods carried in Genoese or Pisan ships duty free. Such victories showed these powers the commercial advantages of espousing the cause of the Church.

Aside from the commercial interests of the Italian cities other economic forces contributed to the Crusades. Among the higher nobility, war was an occupation paying large returns to the victorious. Fundamentally the fighting for certain alleged ideals under the name of chivalry was nothing more than one lawless lord endeavoring to widen his domains and increase his feudal income at the expense of his weaker neighbors. In simplest terms feudal warfare was an economic game somewhat cruder but not greatly different from modern business. Chivalry and coats of arms stood for one; competition and trade-marks stand for the other.

The feudal laws of inheritance (primogeniture), which deprived all but the firstborn or oldest son of any rights in the father's estates, greatly stimulated the adventurous and war-like spirit of the age. Younger sons found the warrior's profession a chance to acquire by force what the laws of inheritance peacefully denied. Further, the Mediterranean, especially the eastern or Levantine coast, had long been heralded in story and song as the land which flowed with milk and honey.

Finally, as a result of several years of drought (1093-1095) and bad harvests, thousands of feudal serfs found the Crusades a heaven-sent opportunity to gain favor in the eyes of God while bettering their economic status in a new country.



3. **THE FIRST CRUSADE** originated from the eloquent appeal of Pope Urban at the Council of Clermont in November 1095. In his brilliantly conceived plan of winning the moral leadership of Christendom by diverting the inter-Christian wars of feudalism into a holy war against the infidel, he promised much to those who would heed his call. To all successful pilgrims he offered absolution from all further penance for their sins, but, far more important from an economic standpoint, he promised complete remission of all Church debts to those who enlisted in the cause. Finally, he used the best modern psychology by picturing the Crusade as an opportunity to escape from the rigors of feudal life into a land of milk and honey.

People with various motives came from all walks of life to enlist in the holy war. The commanding feudal lords saw a unique opportunity for political conquest under the cloak of a great cause; thousands of feudal outcasts (free-booting knights, petty merchants, oppressed debtors, runaway serfs, and dispossessed manorial tenants) hoped for personal gain; while the rank and file of devoted followers sought a better life in the next world as a reward for their efforts.

The motley gangs came from all parts of Europe and marched under the leadership of four feudal nobles of the second order. Godfrey and Baldwin of Bouillon led the northern force, consisting of nearly 90,000, from Flanders, Lorraine, and the Rhine Valley; Raymond of Toulouse commanded a contingent of nearly 100,000 from Provence, Burgundy, and Lombardy; while Boemund, son of Robert Guiscard, headed a Norman army of some 30,000 from southern Italy. The ranks of the commanding nobility included several hundred lesser lords, while the main force of rank and file swelled to 250,000 by the time the many gangs assembled at Constantinople in the spring of 1097. From here the march led through territory held by the Seljuk Turks. With the aid of the Roman forces, dispatched by Comnenus to regain Roman provinces in Asia Minor, the

Crusaders captured Nice, the westernmost Turkish stronghold, and put to route the Moslem army sent against them at Dorgleum. These victories encouraged the Crusaders but made further progress increasingly difficult. Having driven the Turks from several provinces, the Roman army deserted the Crusaders to occupy and hold the regained territory while the retreating Turks laid waste the country ahead. With a large number of the discontented feudal nobles, Baldwin, the brother of Godfrey, abandoned the cause and established himself and his followers as rulers of Edessa.

By the time the Christian forces reached Syria they had lost most of their horses and their ranks had been thinned by famine, disease, and desertion. Had not a series of favorable events occurred at Antioch the Crusades might have ended there. First, the Genoese arrived on the coast with horses, food, and military equipment. These they offered the feudal leaders in exchange for trading concessions in such coastal towns as they might capture. Secondly, the struggle in Syria between the Seljuk Turks and the Fatimite Egyptians reduced the resistance at Antioch. Even with these favorable circumstances it was necessary in October of 1097 for Boemund to use treachery to gain the city.

With victory the rivalries of the feudal leaders flared forth. A dispute between Boemund and Raymond over the possession of Antioch delayed further advance until the following year. Finally, the rank and file forced Raymond and Godfrey to leave Antioch to Boemund and to move southward. Advancing southward along the coast they reached Jaffa, where the Genoese again bartered their assistance for trade concessions. Jaffa was taken and became the base for the final thrust inland. With fresh horses, food, and equipment Godfrey conquered Jerusalem in June, 1099, after a siege of several months. Here the fanatical fury of the Crusaders led to the wholesale slaughter of the inhabitants. The hacked and hewn bodies of men, women, and children rose in heaps while the gallant

knights rode their horses through human blood to the Temple, there to give thanks to the Prince of Peace. Again the motives of the feudal leaders became evident when a quarrel which broke out between Godfrey and Raymond over the new spoil, ended with the ousting of Raymond and the establishment of Godfrey as ruler of Jerusalem. With a detachment of followers, Raymond carried the first Crusade to an interesting anticlimax with the capture of Tripolis as his prize. Each of the four leaders now had attained his personal ambitions.

4. **LATIN STATES:** The first Crusade laid the basis for cultural diffusion between the rich Saracen civilization and Europe. After using the war spirit of the times to extend and consolidate their conquests, the four feudal overlords set up petty feudal states in Syria: the County of Edessa under Baldwin, the Principality of Antioch under Boemund, the County of Tripolis under Raymond, and the Kingdom of Jerusalem under Godfrey. The strength and weakness of the new Latin states lay in the trading concessions held by the Italians. In return for their aid in the conquests Genoa and Pisa demanded a share of the booty, special quarters in each captured town, and the right freely to import and export goods. Under these provisions Genoese colonies grew up in the Latin cities free of all taxes and with a monopoly of trade. This situation played a crucial part in the development of the feudal states. First, the chief source of revenue was diverted from the government to the merchants. Secondly, trade required political sanction but not Christian control. For two centuries the fate of the Christians in Syria rested largely with the Italian commercial cities.

Partly to insure the continued support of the Italian merchants and partly to maintain their ruling position over a large alien population differing from them in customs, language, and religion, the successors of the original Crusaders adopted a policy of conciliation rather than subjection. The younger generation of Latins established

religious tolerance, intermarried with the Moslems, struck coins with Arabic inscriptions, and even quoted from the Koran as a trade stimulant. They found that the Moslem civilization offered many worldly satisfactions and stood in sharp and pleasing contrast to the rigorous abstinence, material poverty, and "otherworldliness" of Christian Europe. The dress, food, and social manners proved enticing and were adopted rapidly. This adoption by Latins did much to popularize Saracen culture, especially among the pilgrims who moved in a constant stream between Europe and the Levant. Indeed, the Crusades saved Saracen civilization from extinction by the nomadic Seljuks and by diffusing it over Europe laid the basis for the Renaissance and the rise of a new world culture—capitalism.

5. SARACEN CULTURE: The vitality and growth of Moslem civilization sprang from its peculiar situation and the attitude of its governing classes. Like all its predecessors from Temple Town culture onward the great gains of Saracen culture were made by members of the upper or exploiting classes. All the revenues of the Moslem empire flowed into the treasuries of a few powerful families, the caliphs at Bagdad and Cordova and the emirs of the provinces. Unhindered by the "otherworldliness" of Christian Europe, these rulers became patrons of art and learning. Mohammedanism did not teach salvation through abstinence from sensuous pleasures nor by the mortification of the flesh. Aside from a few tenets its followers were free to indulge their sensuous as well as their intellectual tastes. The ruling classes had learned to tolerate widely varying customs and beliefs and had often recognized the superiority of certain traits in the cultures of conquered lands. Their wide contacts made them progressive and they quickly abandoned an old for a new and socially superior way of action. For centuries they had possessed Greek and Hindu literature and had done much to promote science and learning by their lavish patronage. The Abyssinian caliphs encouraged scientific study on the basis of the Greek

classics. At Bagdad there arose the "House of Science," manned by a corps of translators and students and equipped with a vast library and a good astronomical observatory. The relatively advanced state of Saracen science is shown by their work in various fields.

In *astronomy* they were hindered by their astrological preconceptions, for, like all before them, they assumed that heavenly bodies influenced human affairs. But despite this they made real progress. In addition to cataloguing the stars more thoroughly than Ptolemy and constructing charts of the orbits of the principal heavenly bodies, they aided the practical man of the day by developing a calendar much more accurate than that of Pope Gregory XIII, now observed by Europeans, and by publishing a table showing the longitude and latitude of all important Moslem cities. These computations arrived at astronomically were quite accurate, in fact, the latitude of Bagdad varied only ten seconds from its modern reading.

In *chemistry*, their Greek heritage of alchemy (the belief that all metals were composed of varying proportions of the same elements and that, by resolving and combining these, any metal, especially gold, could be derived from any other) did not keep them from having a knowledge of alkali, alcohol, sal ammoniac, corrosive sublimate, and silver nitrate nor from understanding the effects of alloys and amalgams. Instead of believing diseases to be the expressions of malevolent spirits or the wrath of God, the Saracens viewed diseases as natural phenomena and became students of medicine with a knowledge of senna, aconite, nux vomica, and camphor.

In *mathematics* the Moslems made their greatest contributions to modern progress. Arabic numerals, which they learned from the Hindus, revolutionized accounting and abolished the abacus. Their introduction of the zero laid the basis for algebra, which was brought to a high state of development by a distinguished Saracen mathematician, and opened the way to higher mathematics, upon

which modern engineering is founded. They made further contributions by originating the concepts of "root," "power," and "sine," and by divorcing trigonometry from astronomy.

These outstanding achievements of Moslem culture did not immediately transform Europeans from illiterates contemplating the world-to-come into scientists investigating and transforming the world about them. These were the higher aspects which found acceptance only as the more material basis of Saracen culture invaded Europe.

6. RESULTS: From a historical standpoint eight or ten Crusade armies were launched against the Moslems and even as late as the fifteenth century plans were under way for renewed attacks. These have little significance to students of economic evolution. After the first Crusade a more or less steady stream of pilgrims passed each year between Europe and Syria. All the wealthier participants availed themselves of the service which the Italian cities offered in the form of boat excursions. When some change of status occurred in the Christian control of Jerusalem this stream swelled into the proportions of an army for the recovery of the holy places. Only two actual Crusades, the first and the fourth, directly achieved results worthy of special consideration. The first gave Europe its opportunity to experience the many pleasures of the Saracen culture, while the fourth gave Venice its control of the rich carrying trade which the changes in the living habits of Europe's upper classes made possible. The more enduring results came from the diffusion of cultures and the expansion of trade which accompanied the varying flow of religious pilgrims or feudal armies. Like the causes, these were economic, social, and religious.

a. ECONOMIC: Mediterranean commerce not only passed from Moslem to Christian hands but also grew to its highest stage of development during the period of the Crusades (twelfth to fifteenth centuries). From the beginning Genoa and Venice had been the chief centers through which

Europe obtained Oriental goods. These early commercial centers merely obtained such goods from the last of a long series of merchants stretching from Cathay or the Deccan to the borders of the Black Sea or the eastern Mediterranean and carried them to their home cities. From here the goods were taken by native or foreign merchants to the great fairs in northern Europe or England. The power of Genoa and Venice depended upon forcing all such goods to pass through them as entrepôts. Their wealth depended upon the ability of feudal Europe to buy such goods and the length and directness of their connections with the sources of supply. So long as they might occupy this fortunate position their interests favored an expansion of trade.

Their great opportunity came with the Crusades. The armies depended upon Europe for supplies, especially armor, horses, and grain. The meager fleets of Genoa were rapidly expanded to meet the demands. Once the Latin states were established the concessions gained in the conquered towns became important trade centers. Always the Latins needed military supplies to repulse raids from one or the other of the fighting Moslem factions. But more important was the flow of pilgrims between Europe and the Holy Land. To all the wealthier and less religious pilgrims the food, clothing, and living conditions of the Saracens appealed greatly. Rice, sugar, lemons, apricots, figs, and dates became regular items of export from Levantine towns. The unsanitary woollens of Europe were used less and less by the upper classes as they became accustomed to bathing and shaving, and to fine soft clothes of rich colors. Cotton, especially muslin and damask (named for the two Levantine towns, Mosul and Damascus, where they were chiefly obtained), became almost as important in Mediterranean trade as wool in Hanseatic.

The new trade, fostered eagerly by the Italian merchants, produced many economic changes in Europe. Early medieval trade had been done almost entirely on a barter basis, but now the inter-regional trade required a true

money economy. Coins were struck by Venice, Genoa, Florence, and Pisa and were widely used by the Crusaders. The need for ready cash to go on Crusades fostered the growth of banking and credit instruments, especially mortgages. The Jews became subjects of hatred and persecution as the Church's attitude toward usury slowly changed and bankers arose to supply the growing demand for a medium of exchange. The increased use of imported commodities by the upper classes required purchasing power which could only be secured through the commutation of feudal services into money payments or the renting and sale of domains. Commercial centers grew in size and importance, the bourgeoisie gained a new status in the rising governments, and law and order replaced the chaos of feudal gangsters. The profit motive and the desire to accumulate wealth now supplanted the decaying attitudes of "otherworldliness" and "salvation." The fairs and merchants' unions were but surface indications of the vast changes being wrought in the cultural pattern of Europe.

One immediate economic effect of the Crusades was increased rivalry between the powerful city-states of Italy. When the Levantine towns became important centers of trade Venice found Genoa had the advantage. Venice endeavored to oust her rival from her newly won position by bargaining with Latins and Moslems for concessions. This trade rivalry and the Moslem attempts to gain control of the Levantine trade became the background for all the later Crusades. The fourth Crusade (1202-1204) became merely a phase of the war between Venice and the Byzantine emperor. By subterfuge and cunning the Venetians used the religious zeal of the crusading army to capture Zara, the only threat to her supremacy in the Adriatic, and to gain complete control of the rich trading centers on the Aegean Islands and along the Bosphorus. With the Black Sea closed to all rivals Venice hastened to cut off Genoa from the Levantine trade by making direct connections with the more distant sources of oriental goods. Marco



Polo was but one of the better known Venetian merchants who penetrated the Far East in the thirteenth century. These attempts largely failed. Open warfare often broke out between the rivals. The victory of Venice in the fifteenth century was one of the chief forces which turned the eyes of Genoese and Portugese merchants westward in their desire to find new trade routes to the fabulous wealth of the Orient. Indeed the merchant and priest found common cause in the exploration of the coast of Africa—one to gain a trade advantage, the other to defeat Islam by a flank attack. Even Columbus hoped to finance a new Crusade from the profits of a newly discovered trade route.

b. THE SOCIAL results of the Crusades were fewer but no less significant than the economic. Feudalism received its death blow and the basis of the modern nation was laid. Marching armies and bands of pilgrims moved from the narrow provincialism of the town or manor into the larger arena of strange lands and strange peoples. Personal enterprise found material rewards and thus stimulated the exploited classes to claim increased wealth. Feudal ties disintegrated and freedom became a reality. The bourgeoisie gained property and respectability as the feudal nobility became impoverished. They acquired status and power as kings sought their advice and financial support. The practice by Pope and king of levying a general tax, such as the Saladin tithe (1188) for the support of the crusading armies, set the pattern for public finance and the growth of the state.

c. RELIGIOUS: Although at first the Crusades diverted the forces threatening the Church and gave the Pope a new power in Europe, they gradually came to discredit the Papacy and ultimately brought on the Reformation. Failure to control the personal ambitions of the feudal leaders brought the earliest criticism from religious writers. The repeated assaults and frequent capture of Jerusalem by the Moslems came to be viewed as the judgment of God. The moral leadership of the Pope suffered greatly. The rise

of trade and money economy, however, produced the greatest strains in Church doctrines. Just price, and usury were so greatly modified by Christian writers that they lost their social significance. The plenary indulgence, first used as a recruiting aid, became subject to great abuse. At first a pilgrim took a vow to complete the journey and had to do so or suffer excommunication. But as the succeeding armies were recruited a money payment came to be accepted from those who failed to complete the Crusade as a commutation of their unfulfilled vows. Gradually this encouraged the sale of indulgences for unworthy causes and ultimately led to the Reformation. The Crusades became a religious Frankenstein and destroyed their maker.

## B. VENETIAN FLEETS

1. **FLANDERS:** While Venice was attaining her supremacy in the Mediterranean she attempted to expand her trade by sending commercial fleets to the chief ports of north-western Europe as well as to those of the Mediterranean region. The most famous of these was known as the Flanders fleet and came each year to England and Flanders from early in the fourteenth century until 1587. Each spring the Venetian senate voted the number of ships to be equipped and armed for the voyage, auctioned off the hold space to individual merchants, and strictly regulated the route, ports of call, and length of stay in each. The galleys were manned with slaves, officered by officials of the government, and provided with soldiers (chiefly archers) for protection against pirates. The fleet usually sailed as a unit and called at Corfu, Otranto, Syracuse, Messina, Majorca, and Lisbon. After crossing the Bay of Biscay to the southern tip of England the fleet divided, one part, usually the larger, going to Bruges or Antwerp and the other to Southampton or London. The accompanying merchants or their agents (supercargoes) disposed of the Oriental and Levantine goods at the great fairs and in local markets. In return they took wool, woollens, leather, tin, lead, lumber, and such

specie as they might secure. After the allotted time in England and Flanders the portions of the fleet would reunite and return to Venice. The entire expedition required about one year to complete.

2. **OTHERS:** Similar fleets under strict government control were regularly dispatched to the Black Sea, Egypt, Aleppo, and the northern coast of Africa. These carried the minerals, textile materials, and timber of northern Europe to be exchanged for spices, silks, cottons, cutlery, jewels, and other costly merchandise from Cathay, India, and Persia. The object of government regulation was to assure a monopoly of trade for native merchants, to protect the property en route, and to safeguard the market by limiting varieties and quantities of goods. By the fifteenth century Venice was the mistress of the Mediterranean and her interests and concessions covered the then known world almost as completely as the British colonies and "protectorates" did in the nineteenth century.

### C. FAIRS

1. **NATURE AND COMPARISONS:** The nearest approach to modern free trade was the medieval fair. The fair offered the merchants from all regions and with all types of commodities an opportunity to meet on a common basis and to transact deals under uniform regulations.

The fair differed from the market in scope, functions, and organization. It convened at less frequent intervals, usually once or twice a year, for longer periods of time (several weeks to two months), and was more cosmopolitan both in attendance and in the types of commodities offered. Fairs were centers of wholesale trade, especially in the great staples, although retail distribution played an important part. Foreign merchants and itinerant retailers, such as chapmen and peddlers, composed the bulk of those attending. Great nobles and higher churchmen found the fair rather than the market an opportunity to satisfy their

demands for fine raiment and the equipage of ladies, gentlemen, and knights. But as is true at our modern county fairs and commemorative expositions the common man as well as the lord and lady found ample opportunity to be amused or to lose the contents of his purse in the shows and games of chance which crowded the "midway" of most great fairs.

2. ORIGIN: Fairs date from classical times but not until the feudal period did they become centers of the inter-regional trade. Many of the great fairs arose out of the protection afforded pilgrims by the Church. In England they arose out of the increased revenue which they afforded the king. By the twelfth century they were held in established places with great regularity.

3. FEATURES: Each fair was unique in some respects but all had more or less common features. Those described here were found in the famous Champaign fairs and in most of the larger English ones.

a. GRANTS: The grant did for the fair what the charter did for the town. It was essentially a grant of immunity from feudal tolls, dues, and restrictions for all those participating. The lord or churchman who received the grant usually paid a handsome sum to the king and thereby gained the right of extending privileges to others at whatever prices he could obtain, subject only to time and place limitations.

The *chief provisions* of the grant may best be described as inducements to merchants. In return for the general fee paid for space in the fair or as an admission charge, merchants from everywhere were freed from all local and royal taxation and were exempted from arrest for any debt or crime except such as might arise from transactions of the fair and within its precincts. To assure equality of opportunity and freedom from gild regulations the charters of some English fairs (Southampton) stipulated that all shops in the near-by town be closed, and that all trade of

craftsmen be conducted at the fair. Sometimes the actual government of the town itself was entrusted to the lord of the fair.

b. **TOLLS AND FEES:** The types and amount of fees collected varied with each fair but tended to be in proportion to its size and duration. The most common were stallage and picage. The former was paid to the lord of the fair for the space occupied by a merchant, while the latter was paid only when holes were dug in the field for the erection of poles or cornerposts of some temporary structure. Another form was the sales tax levied upon all transactions, either according to a schedule for various commodities or on a percentage *ad valorem* basis. Sometimes a general admission fee was charged but this discouraged attendance and was looked upon with disfavor. Many minor fees were imposed for the use of standard weights and measures, for attestation of sales and contracts by official notaries, and as fines paid for breaking the peace or infractions of the mercantile laws of fair dealing.

From the tolls and fees collected the lord of the fair paid many expenses. First he paid the cost of the charter or grant, then the rent of the land, and finally, the salaries or wages of the personnel of the fair. The fair was often complex and required many persons to assist in its organization and administration.

c. **THE PERSONNEL** of the larger fairs was highly varied and specialized. Almost invariably a staff of police patrolled the grounds and maintained order. Legal affairs became the special function of a staff of notaries, clerks, inspectors, and sergeants. Notaries affixed the official seal or made an official entry of transactions, especially those involving the delivery of merchandise at some future date. Clerks were employed in considerable numbers to record the payment of all tolls, fees, and fines; while inspectors made daily rounds to check weights and measures and to see that rules regarding minimum quality were obeyed. The sergeants enforced the decrees of the pie powder court. But

the most important member of the staff was the money changer. All comers to a fair were usually required to have their coins or notes valued in or exchanged for the currency officially recognized.

Usually fairs were held in a large, flat field at important intersections of trade routes, but since such places were often the sites of towns the fair was located in the nearest suitable or obtainable field. Merchants chose by lot or were assigned space along the streets of the field. Often they were arranged by places from which they came or by the principal commodity which they sold. This practice doubtless aided customers in making comparisons of similar goods and promoted trade just as do modern "automobile rows" or "wholesale districts."

d. COURTS: Perhaps the most significant feature of the great fairs was the *pie powder* court. This court took its name from the French term "*pied poudre*" or dust of the feet, because of the speed with which justice was administered—before the dust was off the feet of the contestants. To understand the methods employed in this court, which exerted such an important influence upon modern commercial law and trade practices, it is well to compare its policy with that of the ecclesiastical and lay courts. The Church courts of the Middle Ages, it will be remembered, had jurisdiction over many civil affairs. However, their chief concern was not the property involved or the injury suffered but the salvation of the souls of the contestants. Motives became of primary importance in order to ferret out the cause of wrongdoing and to correct the behavior of the person. Long, careful procedure was often a feature and since the whole of eternity was involved the "law's delay" was of no comparative significance. Manorial courts and town (gild) courts inherited much of the ecclesiastical point of view and although more attention was given to restitution of property or compensation for injury the ethical aspects were still prominent. Even the *Curia Regis*, established in the eleventh century by William I,

was concerned with crimes which threatened the safety of the kingdom and was never noted for speedy administration.

All these forms were inherently unsuited to the business of the fair. Here were men from many lands with different cultural backgrounds. Concepts of personal salvation and ethical values were so different as to forbid any common ground for settlement. But the matter of exchanging goods and keeping promises was a common denominator. The primary problem of most cases was how to determine the facts and then to attain a restitution of the misused property or the fulfillment of a definite promise. The salvation of the maldoer did not enter as a factor. To restore the contestants to their original status with respect to the control of wealth became the primary objective. Such punishment as was inflicted was not for the good of the convicted one's soul but for the good of the trade. Since the chief concern of merchants was wealth the most common penalty was a fine.

The court was very simple in organization and administration. When an offense was committed the aggrieved party caused the arrest of the accused by the sergeant and the lord of the fair was immediately notified. He or his representative convened court either at a booth reserved for that purpose or at the scene of the act. The jury was picked from fellow merchants and witnesses were called. Informality characterized the proceedings and the contestants required no lawyers to represent them. The facts were established as far as possible while the instance was fresh in the minds of witnesses. At the conclusion of testimony judgment was passed; the persons were restored to the status justified by the facts; and the case usually closed. Appeal was sometimes possible but seldom used. Occasionally the town whence a merchant came was held responsible for enforcing the judgments of the pie powder courts. This was particularly true of those towns where a strong merchant gild was in control, as in most Hanseatic and Italian towns. All merchants

from towns which failed to comply with the orders of the court were banned from the fair. Merchants from Florence, Bologna, and Lucca were banned for several years from the famous Champaign fairs. The merchants who comprised the "jury" often exchanged experiences in arriving at a decision. Methods of procedure were thus compiled from many sources. Many features of English commercial law can be traced back to Venetian laws. The merchant law (*lex mercatoria*), as this body of law came to be known, grew into a code of procedure which came to play an ever more significant part in social relations as feudalism disintegrated and the scope of business grew.

4. **COMMODITIES:** The commodities sold at any one of the larger fairs beggar description. In general the *finer type of goods* predominated. When we reflect upon the great hazards attending medieval travel and remember the relatively vast distances from which Oriental goods were brought, it is evident that only goods having a very high value-to-bulk ratio could survive. When a nobleman needed a new sword or his lady a new gown they awaited the nearest fair. Fine textiles, such as cotton and silk from India; rare furs from Russia, especially ermine, which was worn extensively by the higher churchmen; highly tempered cutlery and various weapons required in knightly warfare from the Levant and Italian cities; jewels and jewelry of all types from Italian and Hanseatic towns; rugs from Persia and Cathay; dyestuffs, especially royal purple (indigo) and red from the Levantine coast; laces and fine linens from Flanders; delicate glass goblets and utensils from Venice and Florence; and spices (pepper, cinnamon, and cloves) from far-off Malay and Sumatra comprised but a few of the long list of luxury goods which the wealthy might procure.

In addition to luxury goods there were numerous more *commonplace commodities*. These were usually sold in wholesale lots; although, when the shops of the near-by town were closed for the duration of the fair, a retail



business in all the usual products of the craft guilds was carried on. The more costly imported raw materials such as gold and silver, furs, rare woods, and steel constituted a large part of the wholesale trade. Many finished commodities such as bracelets, caps, small musical instruments, and the like gave chapmen and peddlers an opportunity to fill their bags or packs. These one-man combinations of variety store, messenger, postman, and newshawk sold their wares in the less accessible hinterland during the rest of the year. The chief export products of the region also found an important place in fairs. Wool, woolfells, tin, and grain were the chief ones at English fairs. At most fairs a considerable business was done in the live-animal sector, where there were all types of horses from spirited chargers for chivalrous service to common draft animals, sheep, cattle, pigs, goats, fowls, and highly prized falcons. The animal stalls of our modern county fairs are a survival of this element of medieval ones. Finally, the numerous products of the butcher and baker contributed their share to satisfy the hunger of lord or lady, merchant or farmer, churchman or peddler.

Besides the array of material goods, the fair offered numerous *personal services*. Barbers, blacksmiths, tailors, leatherworkers, cabinetmakers, carpenters, and craftsmen of all trades afforded new and repair work. And the lighter but none the less important wants of man were satisfied by a highly varied staff of amateur and professional entertainers and tricksters. Most of the acts and games of chance which today grace, or disgrace, the midways of our carnivals and fairs were there. Potent beverages, enticing but brazen women, and hilarious song and music contributed their share to giving the public what they wanted or, in the stricter economic parlance, what they were willing to pay for. Dog tricks and performing bears, rope walkers, acrobats, storytellers, fortune tellers, professors of magic, games of skill, games of chance, and an endless flow of stimulating beverages all combined to make life merry.

5. **FAMOUS FAIRS:** Although fairs were held all over western Europe and England from the eleventh to the fourteenth century, certain ones attained a position of dominance. The Stourbridge Fair (near Cambridge) was the largest in England. Within easy reach of the main parts of the east coast, it drew merchants from Venice and Genoa with silk, velvet, cotton, and jewels; from Flanders with fine linens and woollens; from France and Spain with wines; from Norway with tar and pitch; from the Hanseatic towns with furs, amber, iron, tin, fustian, buckram, wax, barley, and wheat, as well as horses and cattle.

Bristol held two fairs yearly which rivaled Stourbridge in size and variety of products. The famous St. Bartholomew's Fair, held at Smithfield near London, attained great size but was primarily a cattle fair. All the lesser fairs were dominated by one or two export products of their region.

The Champaign Fairs (1152-1350) were by all methods of comparison the greatest in western Europe. The main trade routes from Venice, Florence, and Genoa and those up the Rhone Valley from the Mediterranean converged upon the domain of the Count of Champaign and then radiated northward and westward to German and Flemish towns. The Count's demesne was a splendid example of the complexity of a feudal holding. The Count had 2,017 vassals, of whom 158 also held land from some 85 other lords. The Count himself held 26 different parts of his demesne from 10 overlords, among whom were the King of France and the Emperor of the Holy Roman Empire. Troyes, the chief fair town, he held from the Duke of Burgundy.

The six Champaign Fairs were held in five different towns: two in Troyes and one each in Provins, Lagny, Bar-sur-aube, and Brie. These fairs lasted six to ten weeks each and succeeded one another in such fashion as to provide almost continuous trading facilities. They contained the widest variety of commodities and services ever assembled in medieval times, and had the unique feature that debts contracted at one fair could be settled at succeeding

ones that year. They reached their zenith in the thirteenth century and declined after the Venetian fleet began its regular calls at Antwerp and Bruges. Other famous Continental fairs were held at Leipzig, Cologne, Frankfort, Toulouse, Lyons, Geneva, and Novgorod.

6. DECLINE: Fairs served the purpose of providing periodic outlets for surplus products and affording the upper classes opportunity for procuring rare foreign goods. But when trade broadened and the medieval antipathy to trade waned the fairs passed away with other decadent institutions. The rise of the Hanseatic League, Merchants of the Staple, and Merchant Adventurers; the increase in the number and stock of peddlers; and better sales outlets such as auctions and established shops all contributed to the decay of one of the most interesting and colorful institutions of medieval trade.

#### D. HANSEATIC LEAGUE

Of the several associations of merchants which grew up as a result of the natural and social hazards attending medieval trade few compared with the Hanseatic League in size, duration, power, or volume of trade. In its early stages the league was primarily an economic organization but later it assumed many of the political attributes of a modern state.

1. MERCHANT LEAGUE (thirteenth century): In its first stage the league consisted of an association of powerful merchants from towns bordering the Baltic Sea.

a. ORIGIN: Of the numerous forces promoting the rise of the early merchant league four seem to have been dominant. First and primarily, merchants united to minimize the *hazards of marine travel*. The lone ship was easy prey to storms and hidden reefs along uncharted courses. Even more helpless was such an unescorted ship against attack by pirate fleets which infested the many secluded parts of the coastline. By pooling their resources merchants were able to build or hire larger and more seaworthy ships and to send out armed convoys to guard them.

The second force promoting the merchant league was the *cost of foreign trade concessions*. Citizens of foreign ports looked with fear and suspicion on all outsiders. Gilds exerted every effort to keep their monopoly of local trade. Inland travel was hazardous and often restrained by petty lords who sought the revenue from tolls. The privileges of buying and selling in certain towns or of traveling inland to fairs and markets could often be purchased from a powerful sovereign. But the fees were usually so high that a large group of merchants were required to make the concession profitable.

The complete *control of Baltic towns by a few powerful merchants* in each was the third and perhaps the chief factor in the rise of the Hanseatic League. It will be remembered that English towns passed at an early date from the domination of a merchant gild to control by a political body elected by the masters of the numerous craft gilds. This phase of the development of the gild system was characteristically English. In towns along the Baltic the merchant gild never lost its position of dominance but rather increased its power as crafts arose. Because of the relatively large export and import business carried on in these towns the development of craft gilds was guided not by the wants of the inhabitants nor by the availability of raw materials in the surrounding country but by the nature of the export market and the type of imported materials. The government of chartered towns remained in the hands of the great merchants. This situation enabled the controlling merchant class to subordinate the interests of the inhabitants to their own economic interests, which lay in overseas trade. Being concerned more with trade and less with craftsmanship, the legal customs became increasingly similar. Merchants trading abroad exchanged points of view as well as goods. Their search for gain made them more sensitive and sympathetic to improvement and change.

A unique combination of *physical and social circumstances* was the fourth factor promoting the rise and growth

of the league. Because monks abstained from meat on most days and the layman during Lent, on Fridays, and on many holidays, the people of Christian Europe consumed large quantities of fish. Most species could not be dried, salted, or smoked and since these were the only available methods of preserving there was always a large market for those varieties which could be so preserved and sent inland. Because it was easily preserved by salting and smoking and because it appealed to the palates of rich and poor, *herring* had the widest market of any. Its nearest competitor, codfish, was equally well adapted to the requirements of inter-regional trade but its habitat and the crude fishing methods made the supply relatively limited. Very early in the thirteenth century Hanseatic merchants gained a virtual monopoly on the export of herring, especially the finer grades caught at Skane, and exercised a control over dried codfish.

From the beginning of the twelfth century until the middle of the sixteenth herring passed each spring from the North Sea through the sound and into the Baltic to spawn. The fish attained their largest size (twelve to fifteen inches) and were most desirable from a market standpoint just before they spawned. The vast numbers which passed through the narrow channels leading from the North into the Baltic Sea made nets and small boats the only equipment required to catch a large supply of the finest grades at such low cost that the controllers of this region enjoyed an almost monopolistic advantage. Some herring were caught along the northern coast of England and Europe but only in relatively small numbers and at much greater cost. The abundance of oak along the shores of Denmark further favored the league since smoke from an oak fire gave the finest flavor to the cured fish. Even salt came largely under its control and for many years most towns of northeastern Europe depended upon the monopolized supply in the hands of the merchants of Lübeck. With such control over these very staple products the Hanse, as the league was often called, grew rapidly in power and wealth.

b. ORGANIZATION: During the merchant stage the Hanse did not attain anything like the organization of the later town stage. At best the merchants displayed the greatest cooperation in the several concessions which they obtained in foreign parts, where success depended upon a united front. In England and Flanders, all merchants from Germanic towns were known as Easterlings and were regarded as members of one powerful organization. In truth the early Hanse was a sort of loose confederation of merchants from certain larger towns or from several towns in a region. It appears that the merchants from three towns were most influential. *Cologne* was the center for all merchants from Westphalen and towns along the lower Rhine; *Lübeck* merchants headed the federation of those from towns of what is now central Germany; and *Wisby* on the Island of Gotland offered a convenient center for merchants from the towns along the eastern coast of the Baltic. Before the end of the twelfth century the Hanse had acquired virtually complete control of Baltic trade and had won concessions in the principality of Novgorod which commanded the trade from the Orient via the Russian rivers.

c. THE ECONOMIC FEATURES of the merchant league consisted of the acquisition of foreign concessions; the development of new commercial practices; participation in the colonization of Teutonic Knights; the building of a powerful merchant marine; and the gaining of a virtual monopoly of important commodities.

(1) *Factories*: The two most important foreign concessions were located in England and Russia. As early as 1157 the Cologne merchants purchased a gildhall in London and the right to admit other German merchants to trading privileges. Soon the privileges were extended to merchants from Dartmund, Soest, Münster, Hamburg, and Lübeck. By 1226 most Hanseatic merchants from the Baltic were admitted to the English concessions.

The early concession in London, like those at Novgorod and Bergen was called a "factory." However, it bore no

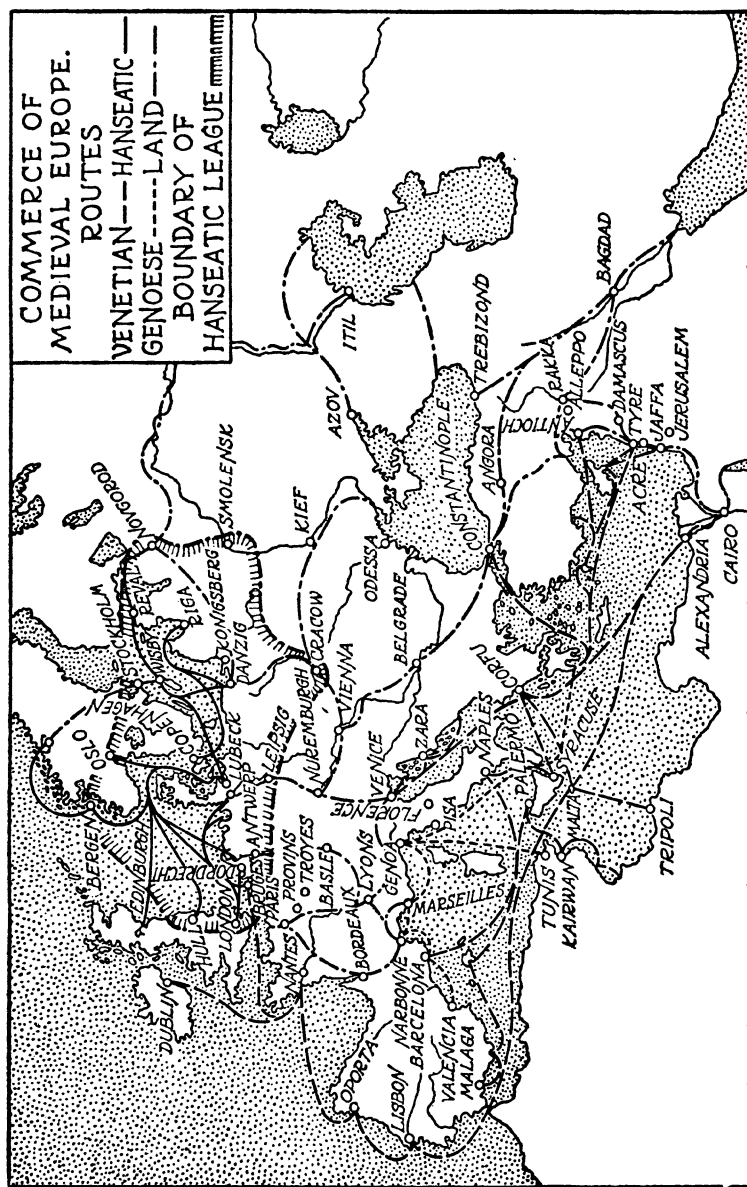


Fig. 8.—MEDIEVAL COMMERCIAL CITIES AND TRADE ROUTES

resemblance whatever to a modern factory or manufacturing establishment. A factory was merely a trading station where "factors" (agents) lived and transacted business. It consisted of warehouses for the storage of newly imported goods or raw materials bought in the outlying districts and awaiting export. Factories also served as living quarters for the merchants during the winter because ice flows or jams made the channels, leading from the North to the Baltic Sea, dangerous or impassable. The expenses of maintaining these concessions came from levies imposed pro rata upon the individual merchants who used them.

(2) *Commercial Techniques*: Toward the end of the thirteenth century writing became a requisite for league merchants and thereafter it became increasingly the practice of larger merchants to establish a central office from which they conducted their affairs by written documents. Book-keeping systems, partnership agreements, contracts, and other devices of commerce developed. The required personnel of assistants, clerks, bookkeepers, and factors were recruited in large part from younger sons of nobles, who found commerce more enticing than the socially approved callings of feudalism—crafts, chivalry, or the clergy. The factories, later called counters, became the more or less permanent home of these employees.

(3) *Teutonic Knights*: Undoubtedly one of the main reasons for the growth of the league's economic power was its connection with the Teutonic Knights. The formation of religious orders for the spread of Christianity among the northern heathens was a result of the Crusades. One order, the Teutonic Knights, began a crusade against the Prussians, Lithuanians, and Esthonians. As they progressed along the southeastern shores of the Baltic they founded many towns which acted as centers for the conversion of the surrounding natives.

The religious activities and disciplinary measures of the league, such as their building of churches, enforcement of celibacy among agents, and suppression of profanity on



ship and shore, doubtless stood them in well with the Knights. As a result the Teutonic Knights gave the Hanse a monopoly of trade in the converted territory and populated new towns in many instances with Hanseatic emigrants. Many of the most important league towns such as Riga (1202) and Reval (1284) were founded during the thirteenth and fourteenth centuries, when the Knights were most powerful. In 1346 the Knights obtained Esthonia from the Danes and by 1386 their territory extended from Prussia to the Gulf of Finland.

In addition to bringing this vast area under the control of the league, the Knights served the Hanse in other ways. Much of the Knights' wealth, gained from conquests and by gifts from many pious people eager to see Christianity spread even by the sword, found its way into mercantile and shipbuilding pursuits. As their wealth increased and their crusading activities waned they became merchants and shipowners on a grand scale. Without the Crusades Venice might never have become the mistress of the Mediterranean and the conqueror of her rivals, the Genoese; without the Teutonic Knights the Hanse might never have become the master of the Baltic and the conqueror of its ancient rivals, the Danes.

d. THE MARITIME ACTIVITY of the league rivaled that of Venice and Genoa. Aside from these three commercial centers there was little interest in navigation. National governments had not yet developed and nothing approximating a navy existed. The fishing done by the inhabitants of coastal towns was carried on in small rudderless crafts about the size of the average lifeboat on modern transatlantic liners. Such crafts seldom ventured more than a few miles from port and operated only in favorable weather. The Hanseatic merchants, however, were confronted with the problems of long voyages and defense or escape from pirates and plunderers. A craft with a large hold for cargo but drawing little water and capable of great speed under oar and sail, called the Kogge, evolved from the shipbuilding

activities of the league. By pooling the resources of many merchants as well as those of the Teutonic Knights, the league succeeded in making shipbuilding a prominent industry, employing skilled craftsmen and incorporating the experience of some of the ablest mariners of the day. The abundant and easily accessible supply of shipbuilding materials, later called naval stores, gave the shipyards of the Baltic a marked advantage over all others, even over the Venetians and Genoese, who were the greatest navigators of the Mediterranean.

2. TOWN LEAGUE (fourteenth to sixteenth century): Before considering the organization, function, and trade of the Hanseatic League as a whole, the forces causing the transition from a purely commercial union of merchants to a politico-economic league of towns and city-states must be considered. The change did not occur suddenly but required more than a century to transpire.

a. TRANSITIONAL FORCES: In addition to the factors which promoted the association of merchants four developments hastened what was probably an inevitable culmination of the growing power and wealth of the Hanse. The first grew out of the political situation.

Continental feudalism was so chaotic that even a charter did not afford much protection to town inhabitants. The charter granted by one feudal lord became invalid when he was killed or the town was seized by a rival gangster. A new charter required the payment of another and usually larger rent (*firma burgi*) and placed such an incalculable burden upon merchants as to discourage trade. Towns in which Hanseatic merchants lived enjoyed considerable *freedom from feudal disturbances*. Petty feudal gangsters feared the military might of the league. During the fourteenth century the merchant guilds of many towns joined the league to secure the political and economic freedom which membership assured. Since the merchant guild controlled the government of most European towns, the act of such a body made the town a member of the league.

The second force promoting the transition to the town league grew out of the *alliance of certain towns to protect trade routes*. The alliance of Lübeck and Hamburg in 1255 for the protection of the land portage between them formed the nucleus of the town league. By taking this route, some twenty-five miles, a merchant could avoid the dangerous passage of the Sound or the Belts. Furthermore, he could evade the tolls often exacted by the Danish king and could escape the possibility of being plundered by pirates along the rocky channels.

A third force was *common political action to gain or retain concessions in foreign lands*. In England the power of the old merchant league rested upon the Carta Mercatoria of 1303, by which Edward I granted specific privileges to all foreign merchants who were willing to pay the heavy but certain duties. The duties imposed by the crown on foreign merchants were heavy, even in view of the status and privileges granted, but because of their certainty constituted a real commercial advantage. The privileges of the Carta Mercatoria were gradually withdrawn from many foreign merchants. However, by uniting their efforts and dealing with the king as a political union of towns the league was able to retain the grants of 1303 and also to increase their property holdings and equipage both at London and at minor factories along the northern coast.

As early as 1356 towns had united to gain mercantile privileges in the important Flemish trading center, Bruges. Not as Hanseatic traders but as representatives of their respective towns, merchants met at Bruges and gained trading privileges in the face of opposition from powerful rivals. Here the concessions of the league ceased to be factories or depots of merchants and became politically subordinate counters of the town league.

But the league of towns thus begun would scarcely have long held together or attained any real federal unity had it not been for the intensification of *external dangers*. Because of the geographical position of Denmark it offered a con-

stant threat to the supremacy of Hanseatic control of trade between the Baltic and regions bordering the North Sea. Until the sixteenth century the southern coast of what is now Sweden was held more or less continually by the Danes, who were thus enabled to command the important channels of the Sound and to levy tolls on the interseas trade as well as to interfere with the greatest single source of Hanseatic wealth—the herring fisheries. The opposition of Danish kings to the Hanseatic trade dated from the eleventh century, when natives of Lübeck and other Germanic towns settled among the Scandinavians of Wisby and usurped the rich trade with Novgorod. The aid given the Teutonic Knights in their conquest of Esthonia gave Denmark further reason to dislike the Hanse.

During the thirteenth century the underlying grievances flared into open warfare. Lübeck usually acted as the negotiating or commanding center in these early conflicts, which fact doubtless aided her in attaining the leading position in the town league. Because of the wide distribution of Hanseatic towns and the many alternate trade routes which it commanded, the league was never seriously hindered by these conflicts. But in 1361 a struggle began which so seriously threatened the league that political organization resulted. In that year Waldemar III of Denmark began to enrich himself by plundering Hanseatic towns and commerce. He sailed to Gotland, surprised the stronghold of Wisby, and captured it. The news reached the Hanse when the town representatives were convened at Greifswald. They voted war, built a fleet, and in 1362 captured Copenhagen. But while their army stormed the fortress at Helsingborg, Waldemar destroyed their defenseless fleet. A truce followed which gave possession of Gotland to the Danes.

The seeming defeat stimulated the Hanseatic towns to a supreme effort. The federation of towns had reached a new level of political and economic integration by 1367. A great army and navy were mobilized. Waldemar did not

await the arrival of the armada but fled in 1368 to Brandenburg, and Denmark fell completely into the hands of the league. As a condition for his return Waldemar signed the Treaty of Stralsund (1370) which gave the league two-thirds of all Danish revenues for a period of fifteen years and stipulated that henceforth no king could ascend the Danish throne without the confirmation of the Hanseatic assembly. This marked the zenith of the political and economic power of the league.

b. ADMINISTRATION: The league was essentially a federation of a few great city-states and many lesser towns. Although it had a higher degree of organization than many of the petty states of the day, it cannot be compared with the national governments of the modern world. The general assemblies, membership regulations, counters, and local divisions constitute the chief agencies through which the administration of the loosely organized Hanseatic League was carried out.

(1) *General Assemblies*: Beginning in 1367 the practice of holding regular yearly instead of sporadic assemblies began. The records (Recesses) of these Diets, which met about midsummer, usually but not exclusively at the call and in the town of Lübeck, constitute one of the few records of the league's activities. The pomp and splendor of these meetings made participation very costly so that only the larger towns sent personal representatives. Smaller towns were indirectly represented by the delegates from the head town of their district. In the spring the largest town in each region held a district council to which delegates from all surrounding towns were invited. The actions of these meetings formed the policy of the district and all business transacted at the general assembly either conformed to this predetermined policy or had to be submitted to the local Diet for confirmation. The assembly costs were met by the individual cities represented. The league had no regular revenues.

The functions of the general assembly were to determine and to administer the foreign policy, to govern the counters,

and to supervise intertown affairs. Orders of the assembly were binding upon counters and branches in foreign parts but not upon member towns until confirmed by them.

The administration of the league both as a union of merchants and as a federation of merchant-gild-controlled towns was probably an easier task than supposed by most historians. The league was primarily a trade association run for the benefit of powerful merchant members. Its primary concern was the protection and development of valuable trading privileges in far-flung centers. The terms under which the counters were held from the feudal overlord of the district in which they were located, the maintenance of the optimum price on commodities offered for sale, and the fair apportionment of trade among the members entitled to trade in a given counter were but a few of the matters regulated by the general assembly as part of the foreign policy. Such matters were always administered with an eye to maximizing the profit of the members and had the hearty support of the majority. The general assembly neither possessed nor needed any elaborate governmental setup for the enforcement of its decrees. Its only method of enforcing decrees against recalcitrant towns was to expel them from the lucrative privilege of trading in the counters. The *Verhansung*, as expulsion was called, was imposed only as a last resort. The suasive powers of councilors usually sufficed. The strong internal harmony of the league is shown by the fact that, so far as official records show, the *Verhansung* was imposed chiefly on towns where the exploited craftsmen attempted to throw off the yoke of the merchant gild or to gain a voice in the council. The success of the craftsmen usually brought little economic gain, since most towns could not adjust themselves to the dislocation of industries produced by loss of league privileges. As punishment for admitting artisans to its council Brunswick was expelled in 1375 and not readmitted until the restoration of the old order in 1380. Even Cologne suffered the *Verhansung* from 1471 until 1476.

(2) *Membership*: Little is definitely known regarding the methods by which merchants or towns became members of the league. The early organization was essentially a commercial league of merchants in foreign places. After the political league of towns was formed new towns could join only by the unanimous consent of all members acting through the general assembly. A prerequisite was that the town have a Germanic population and that the government of the town be in the hands of the merchant gild. The binding element was economic advantage arising from exploitation of town populations and monopoly of important products and channels of trade. The composition of the league was always fluctuating and it is impossible to determine the exact number of towns which belonged at any given time. The towns were scattered over a vast territory and their interests, both territorial and commercial, often clashed. Only in time of danger did the league display any real solidarity. Towns tended to join or withdraw from the league as the economic interests of the control classes were best served. Local autonomy was high in all matters except foreign trade.

The number of member towns at any given date is not definitely known. Considerable secrecy surrounded the organization and operation of the league and no official listing of towns has ever been found. From the extant Recesses of the Diets and other sources a list of 115 member towns has been compiled. However, the greatest number ever to have membership at one time (probably in the last half of the fourteenth century) is believed to be 77. At its height the league's towns were distributed from Cracow on the east to Karpen on the Zuider Zee and from Reval on the Gulf of Finland to Cologne on the Rhine.

(3) *Counters*: After 1341 the concessions of the league were called counters instead of factories. These amounted almost to dependent colonies. Within the territorial limits of the counter the decrees of the general assembly were supreme. All warehouses, docks, houses, and barracks

used by the merchants or their agents were immune to the laws of the city and under a special code imposed and administered by the league. The four greatest counters, located at Novgorod, Bergen, Bruges, and London, differed somewhat according to the terms of the charter and the type of trade carried on from them.

The one at *Novgorod* clustered around the great Hanseatic church and formed a separate quarter of the town. Here the merchants and agents maintained a celibate organization under the rule of an elected alderman. It can be most aptly described as a commercial monastery housed in a fortress.

At *Bergen* about three thousand merchants resided more or less permanently in a single community but divided according to the towns they represented. By various methods they gradually excluded the native Norwegians from trade in the harbor and even attempted to limit the number of Hanseatic towns which could share the privileges. Through these counters the league attempted to control all trade with Russia and the Scandinavian region.

The counter at *Bruges* afforded access to the manufactured goods of France and the Oriental wares brought there each year by the Venetian fleet. This counter was governed directly from Lübeck since it was not established until the town league had taken definite form. The severe competition at this point from the rival Flemish Hanse limited the scope of activity. To avoid the unfavorable trading situation existing at Bruges with respect to Oriental and Levantine goods the league operated two minor depots in more advantageous places. One at Lisbon enabled them to intercept the Venetian fleet before it reached either of its two northern terminals—London or Bruges. The chief part of the trade with Venice, however, centered in Augsburg, Nuremberg, and other southern Germanic cities, which formed a subordinate Hanse and operated a branch in the city of Venice. These depots were only a few of twenty-eight which the league at one time or another



operated in addition to the four major counters. Usually these minor stations were branches of the counters and all dealings with them passed through the central offices.

The fourth counter, at *London*, was perhaps the most powerful and valuable one of all. We have described the beginning and growth of Hanseatic activity in England until the time of the *Carta Mercatoria*. Thereafter their possessions and powers expanded even more rapidly. The wealth of the merchants was comparable to that of the Florentines who resided in London and who acted as bankers not only to feudal lords and clergy but even to the King himself. During the wars against the French, Edward III received large loans and material assistance in the form of ships and naval stores from the league. The merchants made loans directly or as agents for moneyed interests in their home towns. In 1343, for instance, when the King levied a tax of forty shillings a sack on all exported wool, he discounted it some years in advance by borrowing from the Hanseatic merchants. Again in 1346 the second crown was pledged as security for a three-year loan. At another time the merchants farmed the Cornwall tin mines in return for an advance. By such methods they not only retained all the privileges of the 1303 grant but extended their property at London and at such additional points as Boston, Lynn, Hull, York, Bristol, Yarmouth, Ipswich, and Norwich and were also able to maintain their premier position in English foreign trade. The last great advance in the league's concessions in England came under Edward III in the Treaty of Utrecht (1475), which comprised the expressed opposition of many London merchants and powerful guilds to the practices of the Hansards. By its terms the Hanse received complete ownership of the Steelyard and the factories at Lynn and Boston, £10,000 for injuries suffered by merchants, and the right to sell Rhenish wines at wholesale.

The *Steelyard*, as the London counter was called after 1433, culminated as a fortified enclosure near London

Bridge fronting on the Thames River and extending back several hundred feet. In it were great warehouses, offices, halls, barracks, wharfs, and all the equipment necessary to house some thousand men and to conduct a huge import and export business. The only communication with the city lay through two huge gates in the wall and stockade which enclosed the area on all but the river side. Over the colony presided a sort of chamber of commerce with an alderman, two co-assessors, and nine councilmen. The league assembly had jurisdiction over this area much as a foreign nation has over its embassies in other countries. All members and their staffs lived according to a strict code. Gates were closed at nine each night and not opened until early next morning. Any agent or merchant failing to be within the walls at that hour or failing to comply with any other of the numerous regulations was tried and punished by fellow members according to Hanseatic, not English, law. All business conducted at the eight subordinate depots was managed from the Steelyard. The English trade exceeded that of any other counter both in volume and value.

(4) *Local Divisions*: Even before the town league took definite form there apparently were small local groupings of the towns. We have already suggested that the merchants from certain larger centers acted as leaders among those from that region. Lübeck, Cologne, and Wisby were the headquarters of the three chief divisions of the merchant league. Later, under the political league, the towns were grouped into four divisions (called fourths) with Lübeck, Cologne, Brunswick, and Danzig as council centers in each. Within the individual towns the government rested with the merchant gild, consisting of the league merchants and sometimes a few wealthy lords. Most real estate in the town, including houses, workshops, halls, warehouses, docks, and even churches, belonged to the active and retired merchants. Practically everyone worked for or was rather directly dependent upon the council of merchants. All trading activity was directly with the consent

and in the interest of the wealthy merchants. Except for the fact that most of the wealthy merchants lived in the towns and often built elaborate homes, life in the typical Hanseatic town resembled that of a modern "company town." Working hours and conditions, law and order, the prices of commodities, and even the recreation of the subservient citizens were regulated by the employing owners in the interest not of the common but rather of their own private welfare. Organizations of craftsmen, except those controlled by the masters, were sternly repressed, even as now. Perhaps it would not be carrying the analogy too far to compare the use of the *Verhansung* in crushing worker control of medieval economic conditions to the modern use of state troops at public expense in protecting the property of corporations against strikers.

3. **COMMODITIES AND TRADE:** For nearly three centuries the Hanseatic League maintained a virtual monopoly of inter-regional trade between England and northern Europe. In the Baltic and North Seas its ships found only pirates to question its supremacy, and by the end of the fourteenth century these had either been subdued or had combined their forces with the league. Except for the Venetians whose direct influence consisted of one yearly visitation to England, the league controlled most of English trade in Levantine and Oriental goods. Only in the trade between England and Flanders did anything approaching rivalry exist. Even here despite the existence of strong competitive merchant associations the Hanse exported the major part of English wool until the rise of the Merchants of the Staple. The league was the greatest trading association of the Middle Ages.

The commodities in which the league traded reflected the vastness of its interests. From the Scandinavian countries, chiefly through its Bergen counter and its fishing and curing stations along the Sound, the league exported cured and salted fish, timber, shipbuilding materials, furs, grains, livestock, copper, and blubber. In exchange for

these went cloth (silks and woollens), clothing, salt, wines, cutlery, drugs, spices, and a host of Levantine and Flemish manufactures. From Russia, through the counter at Novgorod, came furs, leather, honey, wax, tallow, amber (used extensively by the churches and monasteries as beads for rosaries and other religious equipage), hair, gold, silver, and even grain. Into Russia came herring, smoked meats, flour, cloth, mercery (certain textiles, manufactured articles, and drugs), spices, cutlery, copper, lead, and many of the products of Italian and Levantine towns. Since Russia and the Scandinavian countries contained no craft guilds of any kind in the fourteenth and fifteenth centuries they were especially good markets for the clothing, furniture, weapons, and tools made by the craftsmen of Hanseatic, English, Flemish, and Mediterranean towns. At Bruges the league conducted mostly a wholesale business. Here the Easterlings brought the raw materials of Scandinavian countries and the numerous finished and semi-finished northern manufactures from Hanseatic towns. In exchange they took both the local raw materials (especially wool, linen, and pelts) and manufactures as well as goods from the Mediterranean brought by the Venetian fleet. A few of the commodities received in this way from Venice were alum, sulphur, tartar, indigo, quicksilver, licorice, caraway, vermillion, lapis-lazuli, almonds, spices (especially anise, white and black pepper, cinnamon, nutmeg, cloves, mace, and cardamom) rice, sugar, figs, dates, raisins, Spanish boxwood, frankincense, cotton, paper, armor, shields, swords, daggers, cutlery, iron utensils, boots, cork, and a thousand trinkets. Through the Steelyard at London and the branch stations along the coast the Easterlings brought England all the products of the north, especially furs, herring, tar, wax, amber, steel, copper, flax, linen yarn, malt, beer, silks, cottons, spices, cutlery, knightly accouterments, and drugs. From England the Hansards exported a large volume of a few products, chiefly wool, woollens, coarse woollen cloth, leather, tin, and grain.

In addition to herring, the league controlled the major supply of other commodities demanded by reason of religious practices. The large quantities of hair, haircloth, oil, and amber products (beads) used by the clergy and monks came almost exclusively through channels controlled by the league. Only certain grades of wax and tallow could be used for the thousands of ecclesiastical candles and these all came from league sources. Ermine robes, widely used by the higher churchmen and nobility, came from Russia where the Easterlings held an iron grip. Indeed monopoly controls gave the league its dominant position and built the foundations of the capital fund which became the pillar of the new cultural pattern.

4. **DECLINE:** It is not surprising that a union founded primarily upon commercial monopoly and the exploitation of artisan classes began to show signs of weakness almost immediately after reaching its zenith late in the fourteenth century. Exhausting wars flared along the Baltic frontier and local revolts of craftsmen occurred with increasing frequency in towns. But it was not until the late fifteenth century that definite signs of decay became apparent. These took many forms and as the sixteenth century dawned they increased in number, magnitude, and importance.

a. **NATIONALISM** was the first and most pervasive force to undermine the league. Larger and larger areas came under the control of the force called law and order. Interestingly enough the money economy engendered by trade and commerce laid the basis for a tax system which afforded its controller the means of enforcing his will upon the underlying population. Money and a price system permitted certain feudal lords to metamorphose into kings with larger domains ruled not by feudal dues and obligations but by a queer survival of fealty (patriotism) and hired dispensers of law and order. These states found their most lucrative income in the control of trade so that the right to trade became a privilege granted to certain favorites, the bour-

geoisie, and enforced by the sovereign through the army and navy.

Henry VII in 1489 secured a treaty with Hans of Denmark which gave England the privilege of commerce in the northern seas and which enabled the rising class of English merchants to found establishments in these ports. The Merchant Adventurers immediately took advantage of this treaty and sold English woolens and manufactures in North Sea towns. In the next century the power of English nationalism found expression in two trading companies in the Baltic, the Muscovy (Russia) Company, chartered in 1553, and the Eastland Company, or Merchant Adventurers, in the Baltic, chartered in 1579. But even before these formal English assaults on the inner trade, the league had suffered from other rising monarchs through the loss of the Novgorod counter.

b. LOSS OF COUNTERS AND TOWNS weakened the league at its most vital points. In 1471 Ivan of Russia captured Novgorod and levied crushing tolls. Bruges declined throughout the fifteenth century as the harbor silted up and the centers and character of the wool trade shifted. Many inland towns withdrew when craft guilds gained control or other outlets of trade appeared. As a result of difficulties in England the league was forced to permit the English Merchant Adventurers to establish a branch at Hamburg in 1475. In England the rapidly growing Merchant Adventurers succeeded in having the Hanseatic charter rescinded by Edward VI in 1551. This was the beginning of the end for although Queen Mary restored it two years later the English merchants continued their violent opposition and even attacked Hanseatic ships. The end came in 1597, when, in retaliation for the expulsion of the Merchant Adventurers from the Germanic towns, Elizabeth closed the Steelyard and abolished all relations with the league.

c. MONOPOLIES, which gave the league much of its economic strength, were lost in several important fields. Near the middle of the sixteenth century the shoals of

herring ceased their yearly visits to the Baltic and sought the coast of the low countries. Here they became the prey of a host of rival fishermen among whom the despised Hansards had little chance. A glance into the progress of the rising commercial nations shows that Holland rose to the front ranks of seventeenth-century world powers largely on the profits from the herring fisheries along her shores. Even the league's salt monopoly waned as bay salt from the west coast of France became increasingly abundant and cheap. Finally, league control of ecclesiastical wares suffered greatly as the Reformation swept over Europe and greatly reduced the demand for fish, wax, tallow, and furs.

*d.* THE COMMERCIAL REVOLUTION, as the transition from feudalism to mercantile capitalism is called, completed the disintegration of the league. The overseas discoveries and the shift of trade routes from the Baltic and Mediterranean to the Atlantic left the principal towns of the league, like the once-powerful Italian cities, off the highways of commerce and at the same time increased the power and wealth of the new nations, which sought to apply the restrictive policies of medieval trade to the game of international rivalry.

## E. ENGLISH MERCHANTS

1. RISE OF A MERCANTILE CLASS: Although English foreign trade remained in the hands of the Hanseatic League and the Venetian Fleet throughout most of the medieval period, certain British merchants in port towns began at an early date to enter this field. The constantly growing financial needs of the king offered the means for evading the customs and provincial restrictions of feudalism. The revenues from the feudal hierarchy were relatively fixed; only through trade could the royal treasury be increased to any great extent. All English kings from William I on gave a ready ear to merchants who offered to buy privileges. As we have seen, these could not always be granted without opposition from towns which contributed much to the royal income with their *firma burgi* or charter rents.

But the benefits of the charters were usually so great as to keep any town, even the larger coastal ones, from running the chance of losing them through too vigorous opposition to the invasion of their alleged mercantile monopolies. The privilege of importing the costly goods demanded by the upper classes and exporting the surpluses from the manors, especially when they brought more money than that paid by craftsmen under the just price and other gild regulations, often found eager claimants among those with the greatest political power.

The relative backwardness of the English textile industry and the growing demand for the finer grades of wool by Flemish towns made raw wool an important export item from a very early date. More and more manorial lords came to raise sheep on their demesne lands because from the wool and woolfells they could secure a cash income or at least purchasing power in the local markets. Instead of being limited to the rude plenty which the best lands and the forced labor of the manor could produce directly, the lords found that by converting these feudal prerogatives into a marketable surplus they could acquire in exchange the commodities made by the craftsmen of the towns or the luxury goods brought to English fairs and other commercial centers from the Continent, the Levant, and even the Orient. Furthermore, the increasing power of the crown reduced the opportunity to acquire wealth by knightly plunder and at the same time increased the variety and amount of royal levies. Such practices as the Hansards' buying of produce directly from the manorial stewards instead of through the regular channels of the local market found as much favor among the landed nobility as opposition by burghers. In more ways than one the feudal nobility favored the mercantile concessions of the king. Because of these circumstances the merchant class early acquired an important place in the central government of England. But from the beginning the British export merchants came under royal regulations and found advantages in organization.



2. STAPLE TOWNS: During the thirteenth century certain towns were designated by the crown as entrepôts for English exports subject to royal duties. Just how this practice originated is not clearly understood. During the reign of the first two Edwards (1272-1327) several towns in southeastern England received royal grants to be the exclusive markets for the chief export product of their region and were called *staple towns*. But since only wool, woolfells, and leather bore royal export duties, these alone came to be called staples. About the same time Parliament (composed entirely of landholding nobles) began to grant the king revenue in the form of wool. To a few great merchants who had sat in his council from a very early date the king would immediately turn for the sale of this raw wool or for a loan pending its sale abroad. To facilitate the collection of the grant and to protect his financial interests the king designated a certain town where the wool was to be assembled and sold. Because merchants not enjoying royal favor tended to boycott this place the king ordered all wool for export to be bought and sold in that town.

Whatever their origin staple towns played an important role in the English woolen trade for some three hundred years. Such towns were not always in England. From 1347 until 1558 Calais, which the English held as a Continental possession, served as the chief entrepôt for the export of English wool and woolfells. Here all such goods were brought for assessment of royal customs and inspection. The chief market for raw wool centered in Flanders, where all the finer grades of cloth were produced. Merchants, then as now, were interested primarily in the sale of a commodity at the highest price obtainable. Clever tricks such as topping a bag of shoddy with a few pounds of long-fiber wool were not unknown. The widespread corporate responsibility of craft guilds for the products of individual members caused defrauded purchasers to associate the shady dealing of an individual with the league, guild, or region to which he belonged. An unfair act of an English merchant was avenged

by taking advantage of the next one from that region or even by a reprisal in the form of a boycott on all English merchants. To protect the Flemish market and thereby to assure the maximum revenue from customs, the crown employed official inspectors to grade all wool. Only that bearing the king's mark or seal could be officially exported. Of course, wool could be smuggled through other channels but this could easily be detected by purchasers since it bore no seal and was not sold by the officially approved merchants.

3. **MERCHANTS OF THE STAPLE:** With the development of the staple towns, the merchants who dealt in wool and woollens acquired organization. Just as the Hanse developed from the association of merchants in foreign ports, so the Staplers evolved in staple towns. They came to constitute a distinct body, usually living in a certain section of the town and electing their own officials, who governed them according to the *lex mercatoria* rather than the regular or common law of England. The functions of the chief officer, the Mayor of the Staple, elected in each town by the merchants using it, consisted of maintaining order, administering justice, and reconciling the interests of the king and the body of merchants. The organization is significant as a forerunner of the numerous regulated companies of the sixteenth century (*cf.* Chapter 8). Membership was open to anyone who paid the usual fees and who complied with the regulations of the king and company. Collectively these merchants enjoyed an official monopoly on the export of English wool and woollens.

The Merchants of the Staple and the system of staple towns marked the first attempt of a strong central government to regulate its export trade. This first company of British merchants remained a power in English commerce until the rise of a native textile industry in the sixteenth century. With the decline of the trade in raw wool and the increase in the cloth trade, the organization attempted to avoid decay by merging with the other great English

mercantile organization, the Merchant Adventurers. This move met with little success and by the seventeenth century, when the export of wool was officially prohibited, they had ceased to exist.

4. **MERCHANT ADVENTURERS:** The second association of medieval English merchants began somewhat later than the Staplers but developed into a more powerful organization with a much more extensive trade. It formed the nucleus for some of the great regulated companies of the early sixteenth century and laid the basis for England's far-flung trading centers of the seventeenth century.

a. **ORIGINS AND DEVELOPMENT:** The origin of the Adventurers is almost as obscure as that of the Staplers. While the latter were supreme in the woolen trade with Flanders, certain other merchants began to venture in the export of the rough, undyed woolen cloth and a few other goods produced by English craft guilds and not covered by the regulations of the Staple. During the fourteenth century, when the Continental staple towns were frequently moved and for some years actually abolished, these merchants greatly increased their business and members. Soon administrative expenses grew and a fee (called a fine) was levied upon all merchants dealing in English cloth. In 1404 the merchants incorporated. By 1462 a royal charter recognized their claim to collect a fee from all English merchants trading with Flanders and in 1505 another charter established the society with a definite central government.

b. **ORGANIZATION:** By the charter of 1505 the Merchant Adventurers incorporated as a company under a governor and twenty-four minor officials. Membership was open to any English merchant paying the entrance fee of 6 pounds, 13 shillings, and 4 pence (fixed by Parliament in 1497) and abiding by the rules of the company. Most members were London mercers but as the organization grew merchants from many English towns joined. Even Staplers were permitted to join when their organization disintegrated. The chief office in England was at the Mercers' Hall in London

and until 1526 their records were not differentiated from those of the Mercers. Exeter and Newcastle housed minor English offices. At Antwerp on the Continent resided the governor and his administrative staff although minor stations were sometimes maintained at Bruges, Calais, Hamburg, Groningen, and Stade. The early monopoly in the export of coarse British woolens laid the basis of their rise but became less significant as their trade expanded and many additional items were added. Each member was relatively free to trade on his own account but usually each venture (voyage) consisted of several ships each holding the cargo of a number of merchants. In the sixteenth century they began the practice of all participating merchants' owning the cargo jointly rather than individually by items. Members formed embryonic joint-stock partnerships and ventured into any port where opportunity for profitable trade presented itself. Soon they invaded the Baltic by the formation of two of the earliest chartered companies, the Muscovy, in 1554, and the Eastland, in 1579. But chartered companies were the beginning of the new era in commerce and will be discussed later.

c. SIGNIFICANCE: The Merchant Adventurers are especially important as marking the transition from medieval to early modern trade practices. They laid the actual basis for the vast regulated companies of the Tudor period, foreshadowed the capitalistic organizations of commerce by their small but definite joint-stock ventures, and unquestionably were the chief factor which enabled England early to enter the arena of mercantilistic nationalism. They are credited with sending ten of the sixteen London ships which joined the British fleet against the mighty Spanish Armada.

#### IV. SOCIAL CONTROLS

Trade and merchants stood wholly outside the legal framework of medieval society. Petty trade as carried on by trade guilds came within the regular jurisdiction of the

cumbersome ecclesiastical and lay courts. Just price, usury, and Christian concepts controlled the dealings of people bartering the products of their special trade and have been dealt with before. But the great merchants and their property were not comprehended in even the broadest limits of social-control agencies. They dealt in movable goods, not tenure or land, and attempted to regulate the actions of their fellows by contract rather than by custom or war.

### A. LEX MERCATORIA

We have already noted how the foreign merchants acquired concessions in English and Flemish towns and lived under rules and regulations quite apart from the other inhabitants. As trade expanded the number of persons and the quantity of wealth beyond the fringe of feudalism increased and with them came into being a unique body of law known as the merchant or commercial law. This *lex mercatoria* arose from the necessity of securing a quick and easily enforced settlement of disputes among men to whom "time was money." This was the chief agency of social control among merchants.

1. FEATURES: In contrast with feudal laws and procedures the *lex mercatoria* was conspicuously different. Instead of requiring great formality, preciseness of forms, and able argument by trained legal talent, it was extremely informal (the substance of the case rather than the form being important) and sufficiently simple in procedure to enable a merchant without any legal training not only to plead his case but also to serve in any capacity in the court. The primary objectives of most feudal laws, especially those administered in the ecclesiastical courts, were the salvation of the accused and the maintenance of the status quo. The merchant law had little concern with salvation and aimed at restoring the contestants to a fair and equitable relationship. In consequence, it dealt primarily with property and contracts and used punishment (penance)

only to keep the offender and others from repeating the act, not to save their souls. Finally, the merchant law resembled the common law of today; it was unwritten and largely judge-made. The feudal hierarchy of laws more closely resembled our statute or constitutional laws.

2. ADMINISTRATION: The earliest courts to administer the *lex mercatoria* were the pie powder ones of the great fairs. These have already been described. Later as trade grew and the functions of fairs came to be carried on more or less continuously in certain towns the law came to be administered in special borough courts. In staple towns, however, a court similar to the pie powder existed from the time of their establishment. Usually these courts had final jurisdiction but in England an appellate court called the admiralty court grew up. This court administered the sea laws and heard appeals on certain cases from the staple courts.

3. DEVELOPMENT: Today commercial law is no longer a special body but is an integral part of the common law. In attaining this position three periods of development can be discerned. From its inception in the early thirteenth century until the beginning of the seventeenth century, the *lex mercatoria* was a special body of laws with special courts as outlined above. Next, in England, it came to be administered as custom rather than law by the King's Court of Common Law. Beginning about 1750 and for a century thereafter, it was administered as a special system of commercial law in the common-law courts. Today it has lost its identity and is merely a phase of the common law.

4. SIGNIFICANCE: In the modern world, where business is the nucleus around which the social system is built, one is not aware of the part played by commerce in the administration of justice. Today the vast majority of all trials are concerned with or grow directly out of economic relationships. Our legal jargon still retains the stilted and formal phrases of feudal times but in all its more vital or dynamic

phases it employs the terms originated in the *lex mercatoria*. In addition most of our concepts regarding honesty and fair dealing come from the commercial rather than the feudal sector of our social heritage. The social-control agency of the merchant and other extra-feudal classes has today become the chief formal one for all modern society.

## V. EVALUATION

Strictly speaking, feudalism was not commercial. The Church, the manor, and the craft gild were the three dominant types of its social organization. Salvation was the guiding ideology for the great mass of the people. Even the upper classes, which lived by the exploitation of the underlying population, conducted their activities according to the strict rules of status and custom. A lord was born superior to the serf and inherited the right to command his labor or his goods, but what he obtained was strictly limited by the rules of the game and not by the opportunities for profit. "To serve and be served" was the duty and privilege of all ranking persons. The world was but the proving ground for the better life of eternity.

Such commerce as flourished in feudalism was conducted under the strict gild regulations or under the direction of extra-feudal classes. Petty trade, an inherent part of the feudal system, was conducted according to its basic ideology. Inter-regional trade, however, was largely extra-feudal. It was carried on by persons having no well-defined status in the feudal order and was conducted on a profit rather than on a service basis. The fairs represented the attempt of feudal society to cope with the increasing demand for luxury goods, engendered largely by the Crusades. Here the upper classes could satisfy their demand for fine goods without too greatly disrupting the activity of the gilds or violating Christian concepts.

The fair was only the focus of a much larger and more pervasive commercial activity. The nucleus of the greater commerce was the commercial activity of the Italians and

the Hansards. Their cities and far-flung interests fringed the more solid structure of feudalism. These centers were certainly extra-feudal in that they were under the control of a class whose members had no official place in the feudal hierarchy and were motivated by the non-feudal drive for immediate personal gain. Although these centers were along the margins of feudalism they were rather closely knit into a functioning extra-feudal system by the sea, which was their chief artery of trade. In these centers, particularly Genoa, Venice, and the Hanseatic towns, the basis for a new organization of society was laid. The very nature of the social process was favorable to a different ideology and cultural pattern.

The problems of the control classes in these cities centered around the acquisition of material wealth or of its equivalent, purchasing power. The mere possession of wealth was not an end in itself. Wealth can be used to satisfy human wants or to aid in the acquisition of more wealth. To the second form of wealth the modern economist applies the term capital. Such wealth is always something over and above that required for the maintenance of the possessor. Socially, it arises out of the economic surplus but capital and the economic surplus are by no means synonymous. Although the economic surplus had existed for centuries only a small part of it was in the form of capital goods during the feudal period. The use of even this small fraction was subject to severe restrictions. The Church employed capital under the limitations of Christian concepts and ecclesiastical doctrines. Manorial overlords used it subject to the restrictions of custom and tradition. Gild masters employed capital under rigid craft rules and Christian concepts which kept any one person from gaining a great personal advantage.

The prevailing ideology of the commercial centers along the Baltic and Mediterranean dictated a very different use of the economic surplus. Under the gain spirit the merchants used their wealth not to assure salvation but



to acquire greater wealth. By trading the products of different regions one with another they gained personal increments in material goods. The merchant had his wealth invested in stocks of goods which did not satisfy his own wants but which rather gave him power in exchange. His object in life was to increase his wealth rather than to acquire any definite or ultimate amount. No quantity of money or stock of goods sufficed; no status in the social order could be attained which gave the holder a secure and lasting position. Rather the social status became a relative matter. One's rank among merchants depended, not upon the total wealth one owned or controlled, but rather upon the difference between one's wealth and that of others. A man stood high among his fellow merchants to the extent that his wealth exceeded theirs. Under such conditions there was neither an absolute nor an ultimate limit to the wealth which gave its possessor rank and power.

Of course such a gain ideology encouraged men to acquire wealth by any means. Commerce offered the greatest opportunities for social gain, since the acquisition of wealth by such means grew from the satisfaction of human wants as measured by the willingness (and ability) to pay for a service or commodity. Pillage offered another means of increasing the differential advantage of the individual or group. The old "in-group" and "out-group" concepts of morality limited the opportunities for a merchant in one town to gain at the expense of another merchant from the same town since such a merchant was a member of the in-group. Usually the in-group rivalry took the form of what is today called competition, that is, alertness on the part of individual merchants seeking to take advantage of the opportunities for gain which were open to all. Often, however, this rivalry was reduced to a minimum by rules and regulations such as the edicts of the Hanseatic Diets. The merchants of a given city or league often pooled their resources in their effort to gain predatory advantage over out-groups. The Genoese and Venetians, for example,

regarded each other as out-groups and, as we have seen, devoted much of their capital to waging war against each other. The Hanseatic League, too, attained its highest development during the wars with the King of Denmark in the fourteenth century. Such pillaging and plundering as was done in armed conflict produced small profit as compared with the larger and steadier gains from commerce.

The core of the new culture that was emerging on the fringe of feudal Europe was the gain spirit. The capital fund was that part of the economic surplus devoted to acquisition of more wealth. Human wants were the basis for the rise of the new culture. When the nobility and higher clergy had become accustomed to the consumption of Levantine and Oriental goods the foundation of an enduring trade had been laid. As the upper classes began to use these goods on an increasing scale they began to search for the means of buying them. The feudal methods of chivalrous pillage were of little avail and revenue was sought by the easier and surer methods of trade. In the search for purchasing power, exportable surpluses such as wool, woolfells, tin, and lumber were produced in England. The feudal system of forced labor and customary dues gave way to a more efficient system of free wage-paid labor. With money economy came an increased use of credit and a demand for the services of bankers. The bourgeoisie, as the gain-motivated extra-feudal groups came to be called, supplied these needs as well as the material basis for a higher standard of living. The sinews of a new order spread over the trade routes and into the growing cities as water seeps along the cracks and into the growing holes in a crumbling dam. Feudalism could not cope with the new demands placed upon it. No one living in the fifteenth century would have believed that the new gain-motivated way of life would rise to the almost universal pattern of behavior in Europe in less than two centuries. Had not the conjuncture of explorations, gold discoveries, and nationalism all been focused upon the relatively short

period of the Commercial Revolution, the pillars of feudalism might have disintegrated much more slowly. The trickle of trade had started the flood which by the end of the fifteenth century had undermined the massive foundations of feudalistic Europe.

### STUDY QUESTIONS

1. In the fourteenth century what did the "known world" mean to a cottar on the manor, a craftsman in an English inland town, the Archbishop of Canterbury, a merchant of Venice?
2. Why is it necessary to distinguish petty (local) trade from inter-regional (grand) trade in the analysis of commercial feudalism? What were the chief hazards of petty trade? Trade with the Orient? Why was English medieval trade meager? What specific hindrances can you cite?
3. Evaluate the political, religious, and economic causes of the Crusades. Why are the Crusades themselves of little economic significance? What aspects of Saracen civilization are most significant in explaining the rise of commercial classes in Europe?
4. Compare the economic, social, and religious effects of the Crusades. How did the Crusades effect the economic power of the Italian city-states? Would the bourgeoisie and the gain-spirit ideology have arisen in Europe even if the Crusades had not occurred? Explain.
5. What factors aided the development of fairs and markets as centers of trade? Compare fairs with markets as to frequency, participants, commodities, features, and scope. Explain why the medieval merchant was not highly specialized.
6. By what possible routes could a wealthy Londoner of the fourteenth century receive silk from China and spices from Ceylon? What is meant by the Levantine trade? Name five cities which played important roles in this trade. Which was the most important? Why?
7. Discuss each of the following from standpoints of: organization, time and scope of activity, functions, significance, and causes for decline.

Hanseatic League  
Venetian Fleet

Merchants of the Staple  
Merchant Adventurers

8. How can you account for medieval inter-regional trade being centered in the cities of northern Italy and of northern Europe? Locate the chief medieval cities in these two regions.
9. What commodities made up the bulk of petty trade in the fourteenth century? Of inter-regional trade? What characteristics distinguish the two groups?

10. How did Christian concepts condition medieval trade? What direct control of economic activity did the Church exercise? Compare the jurisdictions of Canon and Town courts.
11. Describe the chief requirements for success as a peddler, money changer, merchant adventurer. Enumerate and discuss the chief techniques of medieval trade.
12. Discuss the origins, development, and features of the *lex mercatoria*.
13. How would you summarize the chief features of commercial feudalism? What factors seem to be most significant in terminating the characteristic aspects and conditions of medieval trade?
14. Point out the chief relationships among the four aspects of feudalism: political, agricultural, urban, and commercial.

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## Part IV · *Commercialism*

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## *Chapter Seven*

# The Commercial Revolution

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### I. BACKGROUNDS

The term *revolution* refers to a period of rapid acceleration in the rate of social change. The origins of a revolution are deep in the relatively quiet period which precedes it. Social changes are the signs of life in any society and, although they are taking place at all times, their number and types vary greatly. For hundreds of years social arrangements may undergo such slight modifications as to be unnoticed by the people living at that time. Such changes are but elaborations of the basic pattern of the day either through the slow process of nature or the more rapid process of invention and diffusion. Eventually, however, the old basic ways, even with all the modifications of man's adaptive powers, fail to meet the problems of the day. Then certain formerly insignificant innovations take on a new meaning and become the basis for a whole new system of techniques and institutions. Instead of minor changes in the specific application of certain institutions, major changes in the social arrangements take place. Then, as was true of the progress in stone techniques among Paleolithic men, the new pattern becomes the basis for a long series of refinements. Later some new force arises either from without or within the culture and again causes rapid changes of proportions sufficient to constitute another

revolution. One group of students believes that all social revolutions are economic in origin and that the course of man's efforts to adapt his material environment to his desires determines the type and scope of the changes in other parts of the cultural pattern. Such students believe that all changes in religion, politics, and art are but phases of the more basic changes in the underlying economic forces. But whether one subscribes to this theory of *economic determinism* or not, it is evident that the problems of material livelihood have always been the major ones for the vast majority of mankind. And as students of economic evolution we are primarily interested in those phases of cultural change which have to do with man's endeavor to make his life more meaningful and satisfying.

#### A. NATURE

The Commercial Revolution refers to the politico-economic aspects of the shift from feudalism to nascent (commercial) capitalism. The Renaissance and Reformation refer to the shifts during the same period in the literary, philosophic, and religious aspects of the changing cultural pattern. The period covered is narrow or broad depending upon the point of view. From the vantage point of today we can see the vast sweep of history from many different angles. Certain developments, such as nationalism or the corporate form of business, can be traced back to originating circumstances and forward to modern social consequences. With regard to trade we could easily date the Commercial Revolution from the establishment of a European market for Levantine and Oriental goods after the first Crusade in the twelfth century to the outrunning of the market by the new power-machine production in the mid-nineteenth century. But from a standpoint of the process of cultural change we can date the Revolution roughly as starting with the Age of Discovery in the fifteenth century and ending with the rise of industrial capitalism in the eighteenth century.

## B. PROMOTING FORCES

Of course, all the development of late medieval trade contributed in varying degrees to the Commercial Revolution but certain specific forces were especially significant in launching its devastating process. These we shall briefly examine before studying the actual process and its consequences.

1. **BOURGEOIS ACTIVITY:** From the beginning of the Crusades the Mediterranean became the center of a steadily increasing trade between Europe and the East. More and more of the luxury goods which the guilds could not produce came to be demanded by the feudal nobility, the higher clergy, and the wealthy burghers. Such trade centered in the two powerful city-states of Genoa and Venice. The rivalry between these increased as smaller centers were crushed or became dependencies. Unhampered by welfare attitudes or Christian concepts of brotherhood, the dominant bourgeoisie in each town turned the fleets which had given them virtual mastery of the Mediterranean against each other. In the late fourteenth century (1378-1381) Venice crushed the Genoese colonial empire in the Levant and drove her from the rich carrying trade. By 1400 Venice was the mistress of the Mediterranean and protected her position with a vast army and navy. Her fleet of 3,000 merchant ships were protected by 45 men of war manned by 36,000 seamen and carrying 40,000 soldiers. Venice reached her zenith at this period with a population of 200,000 and an annual revenue of \$2,500,000. The power which such revenue gave can be better appreciated when we remember that wheat sold at eighteen cents a bushel and an ox brought about three dollars.

2. **VENETIAN SUPREMACY:** The expulsion of Genoa from the eastern Mediterranean and the keeping of other rivals from Venice's private sea gave the first impetus to exploration and discovery. The writings of Marco Polo did much to stir the efforts of the frustrated Genoese mer-

chants to find ways to circumvent Venice's Levantine monopoly and obtain goods directly from their sources in Cathay and the Deccan. Interestingly enough, Marco Polo wrote the story of his travels while in a Genoese prison (1298), to which he was confined for three years after being captured during a naval engagement with Venice. Polo's was the most famous but not the only account of the East. In 1291 John Corvino, a papal missionary to India, wrote an able account of the Deccan and its natural resources. Later, while serving as the first and only archbishop of Peking, he sent back long accounts of the country and its people. Many minor missionaries, envoys, and traders penetrated Asia in the wake of the crusading movement and brought back accounts of the wealth and luxury of Oriental centers.

3. EARLY EXPLORATIONS: The extent of the early explorations into the Atlantic is not known but from the earliest maps it is evident that the Genoese and Portuguese had made long voyages. In 1351 the *Laurentian Portolano*, a map made by sailors for the use of sailors, gave with considerable accuracy the western coastline of Africa, the position and coastlines of the Madeiras, nine of the Canaries, and eight of the Azores Islands. Since the Azores are nearly 800 miles from the nearest point on the European coastline and about one-third the distance between Lisbon and New York it is evident that medieval conceptions of a flat earth and the dangers of the open sea meant little to the practical mariners or merchants seeking more profitable trade routes. In fact, the search for new routes to the Orient had gotten well under way before Columbus stumbled upon the New World or Vasco da Gama set a new high in profitable ventures. The African coastline unfolded rapidly as Sierra Leone was officially discovered in 1460, the equator crossed in 1472, and the Congo River explored in 1484. The rising nations were eagerly seeking revenue and spoils from a direct water connection with the glamorous East.

The new activity in the Atlantic received a further stimulus from Mediterranean events. For nearly fifty years after her attainment of supremacy, Venice waxed rich on the ever-increasing flow of goods between Europe and the Levant. Larger ships reduced the cost of carriage, vast banking and trade connections with northern Europe broadened the market, and the commutation of feudal dues into money payments brought greater demand for luxury goods. The production of wool, cloth, grain, and timber for export by enterprising groups of merchants in England and northern Europe supplied the necessary basis for exchange without which no trade can long endure. This rapidly growing trade encountered its first serious interruption about the middle of the fifteenth century.

4. **MOSLEM ACTIVITY:** The capture of Constantinople by the Ottoman Turks in 1453 not only injured the prestige of Venice, which had attained its first step in commercial greatness by a similar conquest in 1204, but also marked the beginning of a strangulation process. The Turks did not stop the trade, as is often claimed, but merely imposed new taxes as sources of revenue. These impaired the profits of Venice since she could pass them on to the ultimate consumer only by a reduction in the volume (and hence total profits) of her trade. Venice embarked upon a long and exhausting war with the Turks which accomplished little beyond financial and commercial decline.

Even more serious from the standpoint of their effects upon the supply of Oriental goods in European markets were the migrations of hordes of wild nomads in central Asia. These plundering bands pillaged caravans, levied prohibitive tolls, and in other ways reduced the flow of goods over the northern and central routes from the Orient. Thus at the very time when the European demand for Oriental goods was increasing, the supply became more precarious and the prices even higher. A vast potential market was accumulating for the merchant who could find a cheaper or more certain source of supply. Meanwhile,

two great forces were generating increased social disorders and preparing society for extensive changes in its organization.

5. RENAISSANCE: For centuries the learning of the ancients had hibernated in the Levant. We have already seen how the Crusades opened the way for the reintroduction of the Moslem phases of this social heritage. But the power of the Church stood as a great bulwark against the revival of the intellectual aspects of classical culture, until, in the late fifteenth century, the conjuncture of two forces laid the basis for a revival of Greek literature and the rise of the scientific point of view. When the Turks captured Constantinople in 1453 thousands of students well versed in Aristotelianism fled to western Europe and found refuge in the wealthy bourgeois centers.

At about the same time *printing* with movable type was invented (1451) and the even more important process of paper making entered Europe from the Orient. The monopoly of the Church upon the production of books was thus broken at the very time when a new point of view (humanism) was emerging. As the common man became literate he read books discussing, not the salvation of his soul, but the exploitation of this world and the betterment of society. The Renaissance, as this new intellectual movement was called, had its counterpart in another momentous shift in attitudes. The Reformation merely turned men's allegiance from the Pope to the newly rising states and directed their attention from the contemplation of "otherworldliness" to the conquest of a newly discovered earth.

## II. THE PROCESS

### A. PHASES

The Commercial Revolution passed through four significant phases. Two of these, the results of fortuitous circumstances, suddenly and completely changed the whole course of human events.

1. **TRADE EXPLORATION:** The Age of Discovery, as the sixteenth century has often been called, was a natural culmination of the forces prevailing in Europe. The conjuncture of increased demand for Oriental goods, interrupted supply, the expulsion of Genoa and European powers from the Mediterranean, and the rise of national states, made exploration the logical solution to many economic problems. How many expeditions set forth; what each added to the slowly accruing knowledge of navigation; and who financed them are all interesting but unanswerable questions. Historians are prone to sketch the march of events in terms of those few individuals who stood at the end of a long series of related events and received the credit for achievements made possible by many lesser and unnoticed individuals. It has often been said that the Genoese, Portugese, and Spaniards were responsible for inaugurating the Age of Discovery. This is deduced from the fact that practically all the early discoveries were made by men from these regions.

From the viewpoint of cultural evolution it is probably more accurate to say that geographic location was responsible for the premier position of the Iberians among explorers. An examination of a medieval map of Europe will give considerable evidence to support such a view. If a series of radiating lines are drawn 500 miles westward or southward from any point in the British Isles or along the northern coast of Europe no land not already known will be encountered. Furthermore, the coastline of northern and western Europe was as well known to Hanseatic merchants as was that of the Mediterranean to Venetian or Genoese mariners. But when similar lines are drawn from Gibraltar the Madeiras, Canaries, and Azores all lie within range. In addition, the coast of Africa offered a guide into ice-free waters. Since the objective was the East with its tropical products, even the medieval theory of a flat earth with an ocean around its rim indicated voyages toward the south rather than the north.



Under such circumstances it was certain that the voyages undertaken by the Genoese and Portuguese would be the most productive in terms of discovery. Physiography rewarded their efforts just as it thwarted those of the men from northern Europe. This theory is further supported by the early period of exploration, which was only investigated by historians after the glamour of the great successes had subsided. The rounding of the Cape of Good Hope was not the unique achievement of the daring Diaz but a result of the perseverance of many men who for nearly two centuries had been sailing southward along the African coast and learning how to combat the heat and fevers of tropical waters. The entire Age of Discovery likewise was merely the culmination of a long period of discouraging effort and preparation. The completion of the process happened to be the work of Diaz, Columbus, Balboa, and Magellan but had these specific individuals never lived their discoveries would have been made by others driven by the powerful forces of a changing cultural pattern.

The *chief voyages* and their resulting discoveries are too well known to require more than brief mention. In 1486 Bartholomew Diaz, a Portuguese, rounded the Cape of Good Hope and went some little distance up the eastern coast. Eleven years later, in 1497, another Portuguese, Vasco da Gama, made the first successful voyage to India. Despite losses in ships and men he brought back a cargo which paid a profit of 6,000 per cent. Even in a world where high rates of interest and profits were common this was phenomenal. Almost immediately fleets were built and sent over the new route to Oriental wealth. Within a few years (1510) the Portuguese under Albuquerque had conquered Goa and established a regular trade which did much to change the daily habits of most Europeans. Meanwhile a Genoese, Christopher Columbus, had sailed westward and discovered what he believed to be islands off the coast of India. Hence he named them the West India Islands (now called the West Indies) and referred to their inhabitants as

"Indians." Although it was later discovered that Columbus was mistaken the inhabitants of North America were never renamed.

The success of Columbus naturally turned the attention of Europe's less fortunate explorers to the possibilities of westward voyages. Immediately expeditions set forth westward and within fifty years the size and position of the New World became European knowledge. While Da Gama loaded his ships in India, two Genoese, John and Henry Cabot, explored the coast of North America and laid the basis for England's first claim in the New World. Interestingly enough the unfolding continents were to take their name from an obscure citizen of Florence, Americus Vesputius, who in 1499 explored Central America. While trying to find a passage through the new barrier to westward progress a Spaniard, Vasco dé Balboa, in 1512 crossed the narrow Isthmus of Panama and beheld the blue waters of the Pacific. Seven years later a Portuguese in the employ of Spain, Fernando Magellan, began the voyage which ended in 1522 at the port of departure. The world had been circumnavigated! But while Magellan was crossing the Pacific a Spanish explorer discovered gold in Mexico and brought the period of trade exploration to an abrupt close.

The achievements of the brief thirty years between the first voyage of Columbus and the Mexican conquest by Cortez did not become apparent until after the golden stream had subsided and Europe had turned again to the production of want-satisfying goods. Nevertheless, the "known world" had grown from a flat Europe and Mediterranean surrounded by vaguely understood lands and seas into a round ball with two mighty oceans and three new continents. Over the all-water route from the Orient to the markets of Europe came ample quantities of the old luxuries and many new goods. The new governments fought over the flood of gold from the New World while many of the recently arrived scholars turned their attention to piecing together the knowledge which these decades had

disclosed and to developing a new scientific point of view.

2. SPECIE EXPROPRIATION: The conquest of Mexico by the Spaniard, Hernando Cortez (1519-1522), poured a stream of specie into Europe and completely changed the motive for western exploration. The flow of gold and silver was not, however, an unprecedented event; in the fifteenth century Europe had experienced two surges of this life-giving blood of commerce. But these had done little more than temporarily relieve the drain of specie caused by the unbalanced trade with the Orient. Now the quantities of metal from Mexico and from Peru after 1532, when Pizarro conquered the Incas, were so large that they not only met all demands of rapidly growing trade but also caused a price revolution in Europe. The actual conquests of the Aztec and Inca specie hordes were quickly accomplished and the tidal waves of precious metals soon subsided to a smaller but still large stream from the mines which the Spaniards opened and forced the natives to operate. Between 1520 and 1550 the specie supply of Europe at least doubled.

The consequences were far-reaching. The acquisition of great wealth by seizure rather than by the slower process of trade became the motive for hundreds of expeditions sent out in great haste by kings, merchants, and freebooters. Under the quest for gold much of the hinterland in North and South America was explored. Only the fierce competition of rival religious sects ever approximated the lure of easy wealth in causing men to go beyond the coasts of the continents which blocked the desired trade routes to the East. For the moment the expeditions of De Soto (1541) and many lesser men were fruitless but they did much to acquaint Europe with the possibilities of the New World and laid the basis for the colonial struggles of the seventeenth century. With the New World divided between them by papal edict, with the best trade routes under their control, and with the world's largest specie horde safely in

hand and ready for use, Spain and Portugal skyrocketed to the leading positions among the rising European nations.

Other nations were forced to adopt from the social heritage a method of acquiring their share of the magical specie. The old gild system of controlling trade was expanded to national scope and became the basis for the mercantile system with specie acquisition rather than welfare as its motive. The time-honored feudal device of military conquest became a system of state pillaging called privateering. Like modern gangsters, the rising nations found "hijacking" a gold-laden Spanish galleon much easier and more profitable than producing the material basis of national wealth. However, the resulting price revolution was the godfather of those two modern Siamese twins, nationalism and capitalism. As these evolved the old feudal system vanished from Europe.

3. FEUDAL EXFOLIATION: The decay of feudalism was concomitant with the whole Commercial Revolution. The pattern of economic self-sufficiency was replaced by interdependency, provincialism gave way for nationalism, and feudal tenure vanished as modern property appeared. The old hierarchy of classes with the higher nobility and clergy living off the great mass of dependent serfs dissolved as the bourgeoisie rose from an insignificant extra-feudal class to one of dominating influence. Instead of inherited chores and religion, the average person was coming to have freedom of choice in whom he served and in what he believed.

All this found expression in the decay of an old set of institutions and in the rise of new ones. Villeinage gave way to free citizenship, with the underlying population divided into agricultural wage laborers and a steadily growing number of urban proletarians. Agriculture itself underwent a revolution; the few staple crops grown on the strips of the three-field system gave way to the scientific rotation of grains and legumes on privately owned fields. In the rapidly growing cities the gild system degenerated into a few great companies as the entrepreneur organized the production of

goods under the domestic system on a grander scale and for distant rather than local markets. The formerly ruling nobility still retained a premier position in the new national governments, but reduced their numbers in wars of succession and lost their coercive power as finance became the dominant problem of an aggressive nation and revenue measures became the prerogative of the bourgeois-controlled lower house of the legislature. Everywhere the pillars of feudalism crumbled beneath the weight of a world-wide, market-centered, bourgeois-controlled system. Many of the more elite features were adopted by the new control class as a means of ostentatious display but the institutional structure atrophied and passed away much as the foliage of a tree withers beneath a blight.

4. COLONIAL EXPLOITATION: The last phase of the Commercial Revolution lay in the partitioning of the newly discovered earth among the nations of Europe. Many factors contributed to this end. The economic life of Europe had been completely remade by the price system, the entrepreneur, and nationalism. Large city populations, made possible by the new agricultural methods and transportation techniques, had been turned into efficient engines for the production of physical goods. Instead of satisfying his wants by the physical production of many goods or the barter of a small surplus with other serfs or gildsmen, the average citizen of the new order came to do specialized work for wages and with these to buy the means of satisfying all his basic needs and a rapidly growing list of supplementary wants. Goods were produced for sale instead of use. The abrogation of feudal rights in the soil forced people into towns, greater efficiency of new methods caused them to abandon older techniques, and the new organization of industry made them dependent upon those who owned large capital surpluses.

All Europe became a throbbing workshop and the controllers of capital and markets became its new masters. The devastating wars of religious and national rivalry

created new markets and at the same time depleted the natural resources of Europe. Meanwhile the trade with the East had been eclipsed by the trade among teeming home populations. Years of fruitless search had failed to discover new hordes of gold while the attempt to gain and hold specie had turned all Europe into rival camps of commercial capitalists. Wealth lay in markets and markets required people, materials, and production. Population was steadily increasing but certain natural resources were dangerously near exhaustion. The newly discovered areas had given up their specie but not their resources. Here was the source of new wealth. At first the lands were parceled out among groups of capitalists who organized companies to exploit the land and the natives. Great regulated and chartered companies tried to monopolize trade in certain commodities or regions for the profit of the bourgeoisie and prestige of a mercantilistic nation. Soon the desire to extend markets led to the planting of colonies. At first these were direct subjects of the company, which was entrusted with all powers of government, but gradually, as their numbers increased and conflicts arose, the military power of the mother country became essential to their life. The early phase passed into a later phase when colonies became little satellites created and controlled by the home governments.

Partly because the Americas were first viewed as barriers on the routes to India but mostly because gold was something simply to be seized and carried back to the homeland, no settlements were made in the New World for more than a century after its discovery.

The spread of European governments over the earth parallels the rise and fall of nations themselves. Portugal and Spain had a unique advantage over the other nations of Europe in several respects. First, the Pope had divided the unfolding world of strange lands between Spain (or more properly Castile) and Portugal and ordered all others to stay out. Secondly, the vast wealth made from Oriental trade and gold enabled these nations almost immediately to

gain the essentials of sovereignty: salaried officials and mercenary troops. The English, French, and Dutch came late into the family of nations and Germany was not even born until the earth had been completely parceled out. The King of Spain was Emperor of Germany and ruler of the lowlands during these crucial years. Furthermore the Hanseatic towns were quasi-independent, without a strong monarch to back them, and too busily engaged in holding their concessions against rising rivals to undertake overseas explorations. England had great national unity but because of her passive nature in foreign trade had little immediate incentive. Her first feeble attempt in the voyages of the Cabots failed to be of significance until more than a century later. Both she and France were restrained by the papal edict and by their relative poverty in purchasing power.

When the seventeenth century dawned the situation had changed. Holland had gained her nationalism and through the fortunate control of the herring fisheries had developed maritime power and wealth. Portugal and Spain had failed to colonize their possessions in Africa, India, the Spice Islands, or Central and South America. Holland used her navy to wrest the rich spice trade from Portugal while England and France became rivals in India and North America.

The forms of colonial exploitation were numerous, the principal types being slavery, specie mining, trading (which amounted almost to fraud in many cases), promotion, regulated companies, chartered companies, and monopolies.

## B. FEATURES

Viewed as a whole the Commercial Revolution produced many changes in the politico-economic structure of Europe which do not fall within any one of the above phases. These deserve careful consideration since they were the cornerstones of the newly evolving cultural pattern.

1. **COMMERCIAL SHIFTS:** The centers, routes, and commodities of European trade underwent the most drastic

changes. The discovery of the New World and the all-water routes to the East gave the towns along the Atlantic coast the advantages that had formerly belonged to Venice and Genoa. Commercial rivalry passed from the stage of two small centers on an inland sea to that of many great national states on the broad Atlantic. With the discovery of low-cost, all-water routes, the old composite system of caravan and galley, further burdened by the new tolls imposed by the Turks as they gained control of the whole eastern Mediterranean, was wholly unable to compete and fell into almost complete disuse. Venice, Genoa, and Florence ceased to be the entrepôts for Levantine goods and Lisbon, Madrid, Antwerp, Amsterdam, and London became the focal points of a new and vaster world trade. Hitherto, the imports of Europe had been almost entirely limited to the products of the Levant and Orient. With the possible exception of spices these were articles of luxury rather than of common consumption. The new trade routes not only greatly increased the supply and lowered the cost of these but also added a vast range of new commodities. Larger ships carried cargoes of bulkier goods for consumption by the rapidly increasing bourgeois or middle classes of Europe. And by the seventeenth century, as Europe became adjusted to the new patterns of business and practical science, the market for necessities among wage-earning proletarians of the coastal towns together with that for common and semi-luxury goods among prosperous mercantile and professional classes far outstripped in volume and total value the market for luxury goods among the decadent aristocracy.

The *variety of commodities* offered in the expanding markets of Europe increased even more rapidly than the volume of goods. Food showed an amazing change. Tea, cocoa, and, later, coffee became common drinks. The meager list of vegetables was increased with potatoes, lima beans, yams, tapioca, and maize. Molasses and sugar passed from the category of a rare luxury or even medicine into common usage as negro slavery solved the problems



of tropical labor and made cane cultivation the chief industry of the West Indies. Tropical fruits such as lemons, oranges, limes, pineapples, and bananas became important in the diet of the wealthier classes. Rum became a popular new beverage as common among the rapidly increasing maritime classes as beer had been among the medieval serfs. Closely associated with food was the new pastime of smoking. Tobacco was the largest single item of export from the New World during the seventeenth century.

*Changes in other habits of consumption* accompanied that of food. More serviceable and comfortable types of clothing came into general use as cotton, silk, and linen became relatively abundant and cheap. Underclothing and bedclothing were practically unknown before the voyage of Da Gama but with the introduction of calicoes, damasks, muslins, and other types of cotton cloth they became attributes of the elite. With the development of silk culture in Italy and southern France, silk was no longer confined to royalty.

The design, furniture, and accouterments of the home displayed similar changes. By the eighteenth century middle-class homes were not considered comfortable without rugs, carpets, upholstered furniture, glass windows, and tiled roofs. From China came wall paper and from Japan came numerous lacquered knickknacks to adorn the well-appointed city home. In the larger yards of the better homes grew an ever-increasing variety of trees, shrubs, and flowers brought from distant climes. The blooming locust and magnolia trees towered above century plants, asters, nasturtiums, sunflowers, dahlias, and tulips, while the Virginia creeper spread over the stone walls of the houses. Indeed, Europe was as much remade by the products of the new lands as they in turn were remade by the swarms of Europeans soon to migrate to the new colonial possessions.

2. FINANCIAL CHANGES: The most important economic feature of the early Revolution was the appearance of the

price system or money economy. The origin of this basic change in man's attitude toward and behavior in his environment lay in the increased monetary stock.

The *influx of specie* from the New World after 1520 was not an unprecedented event. In the thirteenth century the gold and silver from the mines of central Europe had enabled the commercial centers of the Baltic and Mediterranean to attain their mercantile supremacy as well as to lay the basis for the future banking powers of the Fugger and other German families. In the late fifteenth century the Portuguese had tapped the gold fields of western Africa at Senegal and Sofala, which, by the way, considerably retarded the "push to the East." But after the first Crusade the trade with the East did much to allay the effects of the new specie flow into Europe, because, from the beginning, this trade was "unbalanced." The control classes of feudalism wanted the relatively light and easily transported luxury goods of the Orient but had little except specie or bulky, low-value goods to offer in return. The result was a constant drain of specie from Europe. Indeed this trade would never have assumed such proportions without the pillaging and plundering activities of the Crusaders and Italian merchants in the Levant. But the Turkish conquests of the late fifteenth century stopped this activity and still further increased the drain. Finally, the discovery of an all-water route relieved the shortage of goods but required a heavier flow of gold. At first every Portuguese carrack carried 40,000 to 50,000 Spanish dollars with which to buy the calicoes of India and the spices of Sumatra. This situation was being rapidly met by the development of new forms of pillage and extortion by the Portuguese in their eastern concessions when Cortez tapped the sources which flooded Europe with incalculable quantities of specie. For the first time the basis for a true price system became available.

The *price revolution* involved changed attitudes, new financial techniques, and the establishment of capitalism

as a way of life. The flood of bullion into Europe between 1520 and 1600 has never been accurately measured but it is probable that the specie in circulation increased by no less than a billion dollars, or about 400 per cent. The new specie did not produce a proportionate increase in the price level, however. First, the large amount of manorial and other non-monetary forms of economic organization absorbed vast sums in merely changing over to a money economy without effecting prices or wages. Secondly, the volume of trade increased very rapidly throughout this period. Thousands of transactions formerly made on a barter basis now involved the use of coins. Thirdly, the efforts of the rising kings and their retainers as well as of the wealthy mercantile bourgeoisie to attain a commanding position in society through ostentatious display greatly increased the demand for jewels, fine clothes, and rare housefurnishings, thus causing a notable increase in the drain of specie to the Orient. Finally, one phase of the new mercantile policy—the government statutes attempting to keep wages low—did much to reduce the effect of the specie flow upon the wage level. But the ever-accelerating flow of bullion and its rapid passage into circulation produced a pressure which all offsetting forces could not counter; Europe passed into the maelstrom of a price system in an astonishingly short time.

The new gold and silver became a part of the circulating medium through many channels. The fleets of Spanish galleons sailing at regular intervals became the target for English, French, and Dutch privateers, who displayed little respect for the authority of the Pope or the naval power of Spain. Such captured specie was divided between the crown of the sponsoring country and the merchants, nobles, or freebooters who equipped the expedition. The part to reach Spain underwent similar division. At first the king took two-thirds, but this so discouraged enterprise that it was found expedient to reduce this share to half, then to a third, and finally to a fifth. The royal share was

immediately coined and spent on political wars of conquest, crusades against the Moors, and upon the ostentatious pomp of an elaborate court. Thus most of the specie flowed from Spain through capture, through fraud among officials and seamen, through bankers who charged fabulous rates of interest upon the advances made to the gold-drunken monarchs, as favors to spendthrift nobles, as gifts to the Church, and as salaries to a large staff of officials and to the mercenary troops stationed in the far-flung possessions of European states.

But while Spain was dissipating her wealth the citizens of temporarily less fortunate countries were accumulating a capital fund and laying the basis of future mercantile power at home and abroad. In Spain the crown and a few great nobles and merchants constituted the chief luxury market of Europe; in England, France, and the Lowlands the great mass of free citizens were being transformed into enduring markets for the more stable products. Everywhere money values were replacing old use values and metal coins became a common possession of even the lowest paid wage laborer.

*A new attitude toward money* constituted a less conspicuous but more basically essential feature of the price system. As city populations became denser, as greater specialization and organization appeared in production, and as the number of full-time government employees increased, the market for every type of commodity broadened. Instead of a few merchants and craftsmen trading the product of their specialty for that of others, most if not all the urban population came to work for money and to think in terms of the market values of their wages. No longer did men value material goods in terms of the effort required to produce them nor even for the satisfaction derived from them but rather in terms of the amount of money they cost. The pungent odor of Mercantilism filled the nostrils of even the meanest worker; everyone strove to better himself in terms of money. Everywhere the aim

became greater pecuniary or market wealth. A man's possessions became valuable not as they served him well but rather as they commanded a high price in the market place. Just as a nation was considered wealthy when it possessed a large amount of gold so an individual was considered prosperous when he possessed a large sum of money. Men came to confuse the measure of wealth with the real thing and to this day most people are price-minded rather than use-minded.

The shift to money economy brought with it a vast increase in the amount and variety of *bourgeois functions*. Modern commercial banking, performing the functions of receiving deposits, making loans, and issuing currency, grew from the needs of an expanding market. The need for a safe and convenient method of settling balances in the enlarged arena of international trade, the requirements for reliable coinage and currency, the growth of long-term borrowing in the form of credit for mercantile transactions all conduced to the development of banking houses whose services transcended national boundaries. With the rise of an intricate financial organization supported by the law and order of government, came the accumulation and widespread application of capital. In 1546 the Fuggers of Augsburg had a capital fund of \$40,000,000 which they had invested at as much as 50 per cent annual return. Money economy offered the first practical environment for the widespread application of capital or surplus wealth which its owner could employ for the purpose of gain. Banking and commerce offered increasing opportunities for investment or the profitable use of wealth. The entrepreneur appeared as the new type of specialist whose function it was to manage the new wealth in its new environment.

The *gain spirit* engendered by money economy found expression in many forms of new enterprises. The most typical were those centering around the fluctuation in market values or arising from the risks and uncertainties

of a poorly regulated, interdependent society. Antwerp was the financial metropolis of the sixteenth century. Here in 1531 appeared the first bourse, an embryonic stock exchange. The gambling, which constituted much of the activity, centered around the prices of capital goods, foreign exchange, and insurance rates. Differences in the prices of exchange in various centers became the basis of much profitable speculation. Marine insurance grew enormously and premiums became more or less standardized through the activity of sharp-dealing agents. Lives of merchants and travelers were insured for the duration of a journey by land or sea. This "insurance" was little more than organized betting. Lotteries of all types flourished. Bets on anything from the sex of unborn children to the profits of a voyage could be had.

Public (state) borrowing and the sale of shares in the great overseas companies of the seventeenth century laid the foundations for true stock exchanges. The first of these was organized in London in 1698, just four years after the Bank of England had been created to aid national credit. In 1724 the Paris stock exchange appeared and within a few years centers for dealing in "futures," "probabilities," and other forms of financial uncertainty opened in most commercial cities.

3. **BOURGEOIS ASCENDENCY:** The personnel of the Commercial Revolution, if such a term is applicable, consisted of the rapidly increasing number of gain-motivated men. Business had become the lifeblood of the new Europe and those concerned with its direction were gaining increased influence in all parts of the social process. The bourgeoisie originated in the commercial cities of the Baltic and Mediterranean and spread along the trade routes, until by the sixteenth century they constituted a great middle class. However, the term class must be used with caution.

Unlike the feudal nobility or the dependent serfs, the bourgeoisie had neither custom and status to sustain its activities nor obligations and duties to force it into a

homogeneous mass. From the beginning its members were imbued with an individualistic psychology and the spirit of enterprise and change. What uniformity existed in its ranks came from the impersonal nature of commercial law. The only pervasive attitude among its members was an unrelenting search for material gain. Viewed from the standpoint of place and function among classes of the day, the bourgeoisie acted as a wedge which separated the upper exploiting nobility and clergy from the source of their power, the underlying population. In time the functionless upper classes largely disappeared while the serfs were transformed into an ever larger class of wage-dependent proletarians by their new and more efficient masters.

The ranks of the bourgeoisie were fed from two sources. The abler nobility adopted the new business techniques and became functioning members of the new class while their less amenable brothers sank into bankruptcy or became members of the proletariat. But by far the larger number of recruits came from below rather than above. As trade grew and market opportunities increased thousands of wage-paid employees acquired the basis of bourgeois power by means of thrift and saving. Within the bourgeois class itself a constant state of flux existed. As technology advanced, new and better commercial and industrial techniques evolved. The owners of the older methods frequently consolidated their interests and attempted to crush the innovation which threatened their investments. But inevitably a new group mobilized their savings and resources to champion the more efficient technique. Out of the ensuing struggle often emerged a new bourgeois group which gained power and wealth as the old atrophied or retired from the field to live the life of gentlemen. Thus at all times the great middle class was a constantly changing entity with the older, conservative elements opposing the newer, radical ones. Instead of a class, one might more realistically view the bourgeoisie as elements of a process. But however one might consider

them, the bourgeoisie gained power as the forces of the Renaissance and Reformation advanced.

From a small class along the fringe of feudalism, the bourgeoisie grew to the dominant force in the changing cultural pattern; they controlled the flow of goods and services which revolutionized the everyday life of the common man; they were leaders in the explorations of the physical world; they built the financial and legal structure of the rising nations; in short they furnished the motivating force in all the chief movements of the day.

4. NATIONALISM: The increasing power of the bourgeoisie found its chief expression in the rising national states of Europe. When inter-regional trade was restricted to a few luxury goods and confined to a few trading centers, merchants were able to form monopolistic associations and to supply the legal and military functions essential to any trade. But when markets spread over vast new areas and trade embraced an infinitely greater variety and volume of goods, bourgeois merchants required an extension of law and order far beyond their ability to supply. Their economic interests demanded the abolition of private wars and petty restrictions on trade, strong military support in opening up new trade routes, and the power of police and civil courts to compel the underlying population to conform to the dictates of a market-centered money economy.

The transition from an internally disordered but Church-united feudalism to an internally ordered but externally irresponsible nationalism was guided by the bourgeoisie and aided by many powerful factors. The Reformation broke the unity of Christendom, turned the allegiance of men from the Church and Pope to the state and king, and added religious jealousies to the economic rivalries of nations in the conquest of the New World. Indirectly it stimulated national sentiments; the reformers used the vernacular, and the various translations of the Bible became the foundations of a national literature. The Age of Discovery



stimulated commercial rivalry, produced the beginnings of modern armies and navies, and laid the basis for a state system of finance and taxation. The Renaissance broke the medieval lethargy and local self-sufficiency and prepared men for the more complex life of a larger world which the matter-of-fact, gain-motivated bourgeoisie were producing. The bourgeoisie played off the interests of the declining feudal classes one against the other until they reduced all opposition to subjection and made themselves the dominant power in the new nationalism. Finally, the new art of printing aided the transition. The medieval control of learning by the Church was broken for the first time and literacy on a large scale became possible. The printed word tended to obliterate the medieval differences between the language of one town and the next and to prevent the rapid and continual changes inherent in an unwritten tongue. The vernacular of the day was standardized over wide areas as Italian, Spanish, French, and English became the accepted literary languages of the rising nations. Like religion, trade and government were liberated from the confines of Latin and their jargon became part of the everyday language of the common man.

Nationalism passed through two distinct phases as the problems of the bourgeoisie grew in magnitude and definition. During the nascent phase the demand of the bourgeoisie was for a government which was strong within, to rule both the Church and the nobility in the interests of mercantile prosperity, and irresponsible without, to aid the fierce competition of merchants for the control of new routes and new regions. This was the period of absolute monarchy and world conquests. Then, having used the king to attain their ends against the forces of feudalism and the rival states in world trade, the entrenched middle class used the growing masses of population to gain more complete control of the national state by means of representative government. Gradually, the political powers passed from the king into the hands of the direct representatives of the bourgeoisie. In limited monarchies and so-called

democracies, the significant powers of state such as appropriations for foreign acquisitions or internal improvements (mostly to further trade) rested with the lower house of the legislature, the direct representatives of the bourgeoisie. Even the constitutions reflected the control of government by business interests. Property and contract became the primary concern of all such fundamental documents.

But this later phase of nationalism did not begin until the forces of the Commercial Revolution had generated a world market and placed enough pressure upon the means of production to precipitate a revolution in power technology. The policy, form, and consequence of the bourgeois guidance of developing nationalism were Mercantilism, regulated companies, and colonization. Mercantilism was merely the spread of the social pattern of the town to the larger area of bourgeois activity, the nation. Regulated and chartered companies consisted of quasi-partnerships between merchants and the state for their mutual advantage in the exploitation of newly opened regions. Colonies grew slowly from two factors: the attempt of the companies to create wider markets, and the attempt of the government to relieve the pressure of population upon a waning food supply. Nationalism owed much to the techniques used by the bourgeoisie in their endless search for gain.

### III. TECHNIQUES

The Commercial Revolution consisted of fundamental changes in the methods of dealing with many social problems. The most pervasive techniques were those dealing with exploration, conquest, and business. All lesser changes grew from these and made possible the rise of commercial capitalism as a new cultural pattern.

#### A. EXPLORATION

Exploration laid the basis for Europe's shift from the self-sufficiency of feudalism to the world interdependency of capitalism. The activity of explorers centered around

improvements in two techniques—navigation and cartography. Mariners sailed the seas and armies of plundering nations marched into the hinterlands of the newly discovered continents. Their activity furnished the data for the rising group of scholars and scientists who built the theoretical basis for man's conquest of the world. Inventions and discoveries in astronomy, physics, and mathematics were quickly tested and adapted to the needs of commerce and industry first by individual explorers and later by agencies created by the rising European nations. The improvements in navigation and cartography were closely inter-related but for convenience in study we shall present each separately.

1. NAVIGATION is the technique of guiding a ship across the ocean. Prior to the epoch-making voyages of Da Gama and Columbus navigation had been greatly advanced by the introduction of a few simple instruments and the compilation of astronomical charts and tables. The *compass* entered Europe through the Levant in the thirteenth century and became the chief instrument in the development of Venetian and Genoese commerce. For several centuries mariners believed the compass to be an unfailing guide and with its help they gradually abandoned sailing along the coast and developed regular courses across the open Mediterranean and Baltic. The *cross-staff* was the second instrument adapted to navigation. From very early times it had been used by astronomers to measure heights and distances but only in the fourteenth century was it adapted to the problems of determining the altitude of heavenly bodies while at sea. With these two instruments medieval navigation had flourished and the Portuguese had begun the exploration of the Atlantic. Prince Henry the Navigator (1419–1460) made the earliest scientific attempts to develop navigation. In the observatory which he built at Cape St. Vincent the first reliable tables of the sun's declination were compiled and the ancient lunar tables corrected. Under his guidance the *astrolabe* was invented

which made it possible to determine more accurately and easily the angle between the horizon and the sun or moon. However, its accuracy depended upon its hanging on a true perpendicular so that it did not displace the cross-staff until long after Martin Behaim, a learned mathematician of Nurmberg, improved it in 1480. By the time of Da Gama's voyage mariners had, in addition to these crude instruments, a table of the sun's declination, a correction for the altitude of the north star, and a few very crude maps.

During the phase of specie expropriation, when Spanish galleons began to cross the Atlantic regularly and explorers renewed their efforts on a grander scale, the problems of navigation became increasingly important. Long voyages disclosed the unreliability of existing instruments and the inaccuracy of charts and tables. Columbus was the first to notice the deviation in the compass (the variation between true and magnetic north), and by 1581 Robert Norman had begun a study of the inclination of the needle as it approached the magnetic pole. Notes of mariners helped astronomers and mathematicians to discover the faults of Ptolemy's astronomy and charts based upon it. But for nearly a century, while Copernicus was laying the foundations of a new astronomy and preparing the way for Newton's great work, the practical mariners received little theoretical help and fell back upon rules of thumb compiled from practical experience. This body of data and such work of scholars as pertained directly to navigation appeared in books and pamphlets. By the end of the century, fairly reliable tables appeared giving the declination and the inclination of the compass along important routes.

When the seventeenth century began navigation was still a very crude and uncertain technique. The problem of finding position at sea remained unsolved. With compass, astrolabe, and tables, *latitude* could be fairly well established but *longitude* remained a matter of intricate and

unsatisfactory calculation. The study of the problem was stimulated by offering rewards for a satisfactory solution. The King of Spain offered 1,000 crowns in 1598 and the Estates General of France offered 10,000 florin. A flood of proposals and experiments burst forth but for a long time nothing practical resulted. Meanwhile, important discoveries in astronomy and mathematics were laying the basis for many future practical nautical aids. In 1675 the cornerstone for a new system of time determination was laid when the English government built an observatory at Greenwich and appointed an official astronomer to supervise its operation.

By the eighteenth century commerce and naval wars had developed to such a point that national governments began to take a direct interest in the development of navigation. Partly as a result of the bourgeois agitation and partly as a result of a series of heavy naval losses resulting from inaccurate reckonings, the British government created the Board of Longitude in 1714. Large sums were appropriated by Parliament to be used by the Board in experimentation and to reward individual inventors. The first practical work of the Board consisted of a survey of the British coastline which began in 1737. By 1765 John Harrison received the Board's reward for inventing a method of finding longitude with ease and certainty. Eight years later he received another large reward from the Board for building the first highly accurate ship clock, called a *chronometer*, by which Greenwich time could be carried to all parts of the world and which further simplified the determination of longitude. In 1765 the Board began the publication of the "Nautical Almanac" and each year thereafter this publication gave the mariners the latest findings of astronomers, mathematicians, and physicists in the form of navigation tables and formulas.

The improvement in instruments which made possible more accurate observation and the use of detailed tables

came from the work of three men. In May, 1731, John Hadley demonstrated his *quadrant* to that godmother of scientific progress—the Royal Society of London. Up to this time all instruments either depended upon a plumb line or required the observer to look in two directions at once. Hadley's instrument embodied Newton's idea of bringing the reflection of one object to coincide with the direct image of the other. This principle is today embodied in the range finder of modern cameras. Hadley's invention quickly superseded the cross-staff and astrolabe but was itself soon followed by better instruments operating on the same principle, the sextants of Dollond and Troughton. With chronometers, accurate instruments, and up-to-the-minute almanacs mariners of the late eighteenth century embarked upon long voyages with as much safety as wooden-hulled and wind-propelled ships would permit. But before steel and steam revolutionized navigation the world had been pretty thoroughly explored and the face of Mother Earth had been sketched with no little accuracy.

2. CARTOGRAPHY: Map making is a function of a mobile society. Until the Crusades had moved armies across Europe and opened regular lanes of commerce, Europeans had little use for maps. Except among a few peoples in history there had been little need for a picture of the surrounding country. The medieval concept of a flat circular earth was a heritage of thousands of years. Just as each man stands in the center of his horizon and the portion of the earth within his range of vision has the appearance of a disk, so the whole earth, until late medieval times, was conceived of as a disk surrounded by the sea. The ocean seemed an encircling barrier since travelers in any direction sooner or later encountered its impenetrable vastness. It is true that certain Greek astronomers like Ptolemy related astronomical observations to geographical measurements and evolved the theory of a globular world, but few shared their views and no extensive empirical verification was

possible. The work of Ptolemy did not become of interest to practical men until exploration had advanced into the broad Atlantic.

Cartography or map making in the modern sense began with the introduction of the compass and the rise of Mediterranean commerce in the thirteenth century. The nautical or *compass maps* were the earliest attempts to supplement the undrawn knowledge of sailors regarding the coast line of the Mediterranean. These maps took their name from the fact that they were made with the aid of a compass. The courses of individual ships were drawn as straight lines and proportioned to the distance traversed from one port, such as Genoa or Venice, to other ports. When a series of diagonals had been compiled from such sources the most important points on the coast and on the islands were fixed. By connecting these points, and making such corrections as the notes of mariners justified, a rough outline of the Mediterranean and its islands resulted. As far as Italian navigation extended and especially within the limits of the Mediterranean a very nearly correct representation of the coastline was secured in the early thirteenth century. By the beginning of the fourteenth century these coast maps developed into maps of countries with trade routes, pictorial figures, and numerous inscriptions. The interiors of the countries remained very confused and inexact.

The first *plane charts* showing longitude and latitude and marked in degrees appeared as a result of the work of Prince Henry the Navigator and became increasingly necessary as navigation extended to the ocean. The Portuguese, English, and French cartographers became competitors of the Italian and the old as well as the newly discovered parts of the world were rapidly reduced to graphs. The new arts of woodcarving and copper engraving aided the rapid diffusion of their labors in printed maps. As the Age of Discovery advanced one of the chief interests of astronomers and mathematicians became the plotting of land masses in

terms of meridians and the determination of such lines on the open sea.

Two major advances in map-making methodology appeared in the sixteenth century. In 1569 Gerhard Mercator developed a projection which did much to aid mariners in plotting sea routes. In his maps meridians of longitude were drawn parallel to and equidistant from each other while parallels of latitude were straight lines but further apart as they progressed from the equator to the poles. It was the first chart on which rhumb lines (lines crossing meridians at equal angles) could be drawn as straight lines. By the early seventeenth century practically all marine cartographers had adapted Mercator's projection. In 1594 John Davis, a distinguished English scholar and explorer, related the globular and plane projections to the problems of navigation. He classified all sea routes as horizontal, paradoxical, and great circles. The horizontal was the short voyage, which could be delineated on a sheet of paper. Paradoxical or rhumb-line sailing was straight on a Mercator chart but curved on a globe. Great-circle navigation was straight on a globe but curved on a chart. This classification did much to clarify the problems of sea-route plotting and aided marine cartography.

In the seventeenth century cartography was revolutionized by the discoveries and inventions in astronomy, physics, and mathematics. The most fundamental changes resulted from displacement of Ptolemy's system of astronomy by that outlined by Nikolaus Copernicus (1473-1543) and perfected by Sir Isaac Newton (1642-1727). Other important factors in the rapid advance in map making came from the government bureaus and from the application of trigonometry to the problem of surface surveys. By the end of the century longitude and latitude could be scientifically determined on land and sea and cartography had reached a high stage of perfection. Governments were surveying their lands by triangulation and had made the first attempts at depicting elevations above and



below the sea by topographical lines. The influence of the bourgeoisie on these early land surveys is shown by the fact that on the *trigonometrical maps* towns formed the central points of the system. The relation of these towns to each other in terms of traveled roads was the important data given. The relative position of inhabited places (markets) became the chief concern of the early bourgeois-paid surveyors.

By the beginning of the eighteenth century cartography was divided into three levels. Maps based upon trigonometrical surveys represented the most accurate technique. Those based upon positions fixed by astronomical observations, on cross bearings, and on chained distances represented a secondary type, which served backward regions where only relatively accurate reckonings were required. These secondary maps had sufficed for the most advanced work until the development of trigonometrical triangulations. The third or most elementary type of map included the work of explorers in little-known regions and of cartographers forced to delineate the features of a region on the basis of compiled notes from travelers or explorers. Cartography had reached its modern level by the end of the Commercial Revolution.

## B. CONQUEST

The most drastically changed technique of the Commercial Revolution was that of conquest. The armies of feudalism were composed chiefly of the higher nobility; war was a noble calling not to be defiled by anyone of lowly birth or rank. The feudal system could only be maintained by the superior fighting ability of the ruling class. The power of a feudal lord depended upon the number of fully equipped knights he could command in the field. The mass of unfree tenants supplied the economic basis in the form of food and services for the maintenance of a leisure class which practiced petty conquest as a profession.

As early as the eleventh century the feudal nobility began to experience serious obstacles to the exercise of its assumed prerogative of seizure by armed force. In England, William the Conqueror imposed his rule over the entire country and took definite steps to curb the feudal powers. To lessen the danger of nobles' mustering their dependent vassals against him, William required a direct oath of fealty from all vassals, great and petty. Then realizing the strength he could gain by catering to rising merchant and craft interests he chartered towns. These franchised towns raised their own militia, composed of freemen who were favorable to the law and order of the king and antagonistic to the feudal nobility. On the Continent the Church turned the interfeudal warfare of chivalry into a semi-united effort against the Moslems. As we have seen, the Crusades failed in all their objectives but they were an important step in the evolution of a new type of conquest. They demonstrated the power of lowly serfs (who composed the first true infantry of feudal times) when led by military leaders and backed with the economic resources of the bourgeois city-states. For the first time large bodies of men were kept under arms and directed against a single objective for several years at a time. The "common man" learned to endure the hard life of a soldier and to seize subsistence from any people or place. But most important of all, the Crusades demonstrated that markets could be won by conquest.

1. **ARMIES:** During the later Middle Ages many elements were added to the developing techniques. The rise of money economy in the bourgeois centers along the fringe of feudalism produced a new military situation. As chartered towns increased, the *firma burgi* (charter rents) more than compensated the king or feudal lord for the loss of military services from his vassals and created a demand for the hired soldier. Commutation of services liberated serfs from their feudal chores while plagues and famines tore many men from their feudal status. Furthermore, the

increasing activity of merchants on the seas and over the land routes provided an excellent training ground and an additional market for the services of dispossessed feudal serfs, who often took up fighting as an unchivalrous but lucrative profession. Not being able to acquire the costly accouterments of knighthood they became proficient in the use of the inexpensive but effective bow and arrow, sword, and dagger. The archers upon the Venetian and Hanseatic galleys or at the head and rear of a merchant's caravan and the pirates or thugs whom they fought all represented participants in a growing profession. The militia of merchant towns and the armies of the rising kings, especially those used in foreign conquest, came to be composed of these mercenary or hired soldiers. The professional, wage-paid soldier was a product of the same cultural milieu that gave the bourgeoisie increased power. The wars of the thirteenth and fourteenth centuries were fought on a grander scale. The armies were maintained by the bourgeoisie though they were led by the feudal nobility, who had ceased to constitute the principal armed force and had gradually gained command of the new infantry units.

The Hundred Years' War (1346-1461) marked the shift from personal feuds to *international warfare*. The victory of the English archers over the stately mounted French knights at the battle of Crécy demonstrated in a convincing fashion the superiority of the new military techniques. This struggle introduced two additional elements of modern conquest and gave the bourgeoisie increased power over government as English and French kings sought their financial assistance. Gunpowder and standing armies swept away the last resistance of feudalism to the bourgeoisie and their new political ally—nationalism.

Just how *gunpowder* first came to be used in warfare is a matter of conjecture. For thousands of years it had been known in China but its uses had been confined to pyrotechnic displays or to frighten evil spirits. The use of the explosive force of saltpeter and charcoal to propel a missile

was probably an invention of the Saracens. During the thirteenth century they used a primitive form of hand grenade and propelled iron balls from small tubes attached to the end of a stick and held against the shoulder. The earliest adoption of the new military technique by Europeans seems to have occurred in 1350, when the Council of Florence manufactured brass cannons and iron balls to utilize gunpowder in the defense of the commune. But not until 1453 during the Mogul attack upon Constantinople were cannons used to batter down feudal parapets.

How rapidly the use of gunpowder for military purposes spread in Europe is difficult to determine. Doubtless its use was at first confined to scaring the horses of the mounted knights rather than propelling missiles. Probably this was the use made of cannon by the British in the battle of Crécy (1346). The earliest extensive use of ball-throwing cannon seems to have been on the ships of the Venetians and Portuguese during the early fifteenth century. But no matter how gunpowder entered Europe, by the sixteenth century the new force had revolutionized the technique of conquest. Had the Spaniards relied upon the lance or crossbow they might never have conquered the Aztecs and opened the dikes which flooded Europe with the metallic basis of the new bourgeois-controlled nationalism.

*Standing armies* originated in France near the end of the century struggle. In 1445 Charles VII created fifteen "campagnes d'ordonnances" to be maintained in peace as well as in wartime. Each company consisted of 100 men-at-arms with their attendants. To this original force of 9,000 mounted troops, Charles soon added 16,000 infantry called "frans-archers." The superiority of a permanent standing army over an assemblage of quickly called feudal militia or hastily hired mercenary troops was proved in the final engagements of the war. As a result permanently paid, regularly disciplined, and better organized troops took the place of the former feudal contingents. These troops were not always national. At first they were partly com-

posed of old bands of wandering mercenaries, but as the feudal spirit gave way to patriotism the proportion of foreigners decreased.

The new military system developed rapidly as nations struggled for supremacy in Europe and overseas. A regular discipline became established with the issue of "Articles of War" by Ferdinand of Spain and Francis I of France. The use of firearms became general and new formations were developed to use the new weapons effectively. Until the early sixteenth century musketeers formed but a small proportion of the infantry; the great bulk consisted of pikemen, whose power lay in deep formations where weight and mass could be produced. The proportion of musketeers increased as wedged-shaped formations gave way to shallow deployed regiments.

The methods of raising armies indicated the commanding position of the feudal nobility and the business-like controls of the chief taxpayers, the bourgeoisie. The king or his commander-in-chief contracted with a wealthy nobleman to raise a regiment. The nobleman received command of the regiment and became the disperser of the sums annually appropriated for its maintenance. He in turn engaged captains, of whom some were leaders of mercenary gangs, others raised armies by persuasive or strong-arm methods, and still others mustered citizens under the authority of the king. The bourgeois control found expression in the royal officers' "commissaries," who were appointed to see that the commanding nobles were fulfilling the terms of the contract. Periodically these men mustered the regiments for review and inspection. Gradually they came to assume the important functions of issuing the pay, buying the equipment, and contracting for the sustenance of the non-commissioned troops. The feudal nobility retained the command and enjoyed the honor expressed by medals and citations.

2. **MARKETS:** The decline of a feudal war-making nobility and the rise of national armies did not result in the use

of military force for defense alone; the technique of conquest merely passed into more powerful hands. The earliest national armies were used by the feudal-minded kings to extend their domains at the expense of other mighty overlords or kings. The fabulous wealth which poured into the coffers of the Spanish monarchs during the early sixteenth century gave them freedom from bourgeois control and their armies marched forth to create a Spanish Europe of entirely Christian faith. This resulted in the raising of vast "armies of defense" in France and the Lowlands. The bourgeoisie were forced to support these feudal armies in order to develop a strong central government in the various regions. As the wealth of the Spaniards waned and as Mercantilism became the guiding policy of the rising nations, the bourgeoisie gained control of the state and of its military power. Slowly but surely the objectives shifted from feudal and religious to commercial and colonial conquest. The national armies came to comprise two distinct divisions. The smaller assumed the defense of the kingdom and represented the older feudal elements. The larger division became the army of conquest to aid the bourgeoisie in their overseas activities. To the nobility and common man at home these were the glorious empire-building armies but to the bourgeoisie who made them possible they were the means of successful competition in the conquest of peoples and resources, the plunder of older civilizations, and the building of new markets.

*Overseas markets* were not the only ones captured by the bourgeoisie with the aid of the new armies and navies. The fighting forces themselves provided one of the earliest large-scale markets in modern times. At first the standing armies presented a motley array of attire and equipment. The individual soldiers dressed in the clothing of the civilian and their weapons were craft products bearing the distinguishing marks of certain masters. The first stimulus to uniformity came from the old feudal practice of knights' wearing distinguishing marks on their shields or helmets. The squire and other attendants of a knight wore similar

insignia. Later all members of a mercenary band wore the emblem of their captain or leader. Even after these bands came to compose regiments in the new standing armies they retained their insignia or dress and carried a banner to indicate their origin. This banner, incidentally, evolved into the national flag, which symbolized the origin (birth) and allegiance (patriotism) of all people in a given territory (nation).

When the king appointed officers to supervise the pay and equipment of the army, the first real *market for ordnance* was created. Partly to increase prestige for the king, who gained standing at foreign courts in proportion to the size and elaborateness of his army, but mostly to get the "cut" which government purchases afforded, these bourgeois officials gradually clothed the men in uniforms and equipped them with standard weapons. Once the idea of rivalry arose among monarchs and nations, the market expanded with gratifying regularity. Bourgeois manufacturers hired the engineering talent of the day to design new and more deadly weapons. The adoption of a new type musket or cannon by one nation resulted in the immediate adoption of the same or "better" one by her rivals. Obsolescence became a new word in military and naval circles.

From all this the bourgeoisie gained in many ways. First, the army and navy were used chiefly in their behalf; trade and commerce became the major cause of international struggles. Secondly, they received huge profits from the sale of food, uniforms, and artillery. And finally they secured handsome returns on the new government securities floated to finance war or to rehabilitate devastated areas.

The value of these new markets can be realized from the increasing expenditures for military and naval purposes. In 1600 France spent \$2,000,000; by 1680 this had jumped to \$40,000,000; and a century later it reached \$160,000,000. These were peace-year amounts and were more than doubled during a "national emergency" or bourgeois

contest. Under the great mercantilistic minister, Colbert, the number of guns in the French navy increased from 1,045 in 1661 to 7,625 twenty years later. Food, too, was bought on a grand scale. More than 11,000,000 pounds of biscuits were required by the Spanish Armada for its Flanders voyage. Indeed the technique of conquest not only served the ends of the bourgeois-controlled state but was itself an object of conquest by the eager salesmen of the new capitalistic economy. We shall see this activity in even grander relief as a part of Mercantilism.

### C. BUSINESS

Business techniques refer to the intricate activity of value creation and destruction as well as to the whole gamut of services concerned with the movement of goods through the valuation processes of a market. The market had become the nucleus of the new commercial protoplasm. Governments rose and fell and people enjoyed the pleasures of an abundant life or the agonies of poverty as business fluctuated. All social activity was affected by and in turn affected the more specialized activity called business. The improvement in business techniques will be discussed in detail as part of the new commercial capitalism which swept over the earth. Here we can only mention the improvement in bookkeeping and accounting, the augmentation in types and scope of credit facilities, the evolution of more permanent and larger commercial ventures, and the widespread rise of dealings in the "futures" and "probabilities" of an intricately inter-related economic system. People became detached from the soil and from crafts and became increasingly a part of the mass of materials which flowed to the point of highest monetary return. The world was "on the go." Rivers were dredged, canals built, and roads paved as goods and people moved in an ever increasing stream. Everywhere the dictates of business sent men in search of new and more profitable



means of satisfying the seemingly insatiable market demand.

#### IV. CONSEQUENCES

The Commercial Revolution set into motion a great number of forces which first transformed society into a market economy and then put such pressure upon production as to ultimately cause a catastrophic change in its technology. The domestic system was the result of the attempt to solve the problems of production for a world market. The sketchbook writers and impractical scientists of the seventeenth century laid the real basis for the development of a power machine age. The Industrial Revolution was unquestionably an inevitable, cultural consequence of the Commercial Revolution. How the revolution in production technology inevitably grew from that in commerce will become increasingly apparent as we study the rise of a nascent capitalism.

#### STUDY QUESTIONS

1. What important explorations were made prior to 1486? What countries showed the greatest interest in exploration during this period? Why? Compile a chronological list of the chief explorations between 1486 and 1550 giving name of explorer, his nationality, sponsoring country, region explored, and chief effects.
2. Summarize the chief changes which occurred in the control and flow of commerce in the Mediterranean during the fifteenth century. Note particularly the parts played by Genoa, Venice, and the Turks. Why did Genoese explorers play such a prominent part? Which countries were most active?
3. When and why did the motives for exploration change? Give the principal motives with the approximate periods during which each predominated.
4. Compare the chief features of each of the principal phases of the Commercial Revolution. What effects flowed from the discovery of gold in Mexico and Peru? How do you account for the fact that no permanent settlement was made in America for more than a century after its discovery?
5. Discuss the techniques which were developed chiefly during this period. Which grew directly from bourgeois activity? From scientific interest?

6. Discuss the origin, nature, and function of the chief instruments used in navigation. Evaluate the improvements in cartography. Why did maps of sea routes develop before those of land routes? What agencies of modern map making were unknown in the sixteenth century?
7. What features of the cultural pattern gave rise to changes in the techniques of warfare? How did the new technology modify methods of raising, equipping, and using armies? What types of markets did standing armies open to bourgeois exploitation?
8. What part is played by the bourgeoisie in the Commercial Revolution? How is the Commercial Revolution related to the Renaissance? To the Reformation?
9. What social controls were peculiarly characteristic of this period? Compare them with those of feudalism.
10. In what sense is it true that the Industrial Revolution was a consequence of the Commercial Revolution?
11. What is meant by an expansion of the market? How did this expansion affect the Gild System, the Domestic System, Nationalism, and Capitalism?
12. What were the principal consequences of the Commercial Revolution? Of what significance are they in understanding the modern economic order?

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## *Chapter Eight*

# Nascent Capitalism

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### I. BACKGROUNDS

Although economists have disagreed widely upon the meaning of the term "capital" when technically used in economic theory, there can be no doubt concerning its meaning to the businessmen who through the centuries have possessed and used it rather than theorized about it. To them "capital" meant surplus wealth available for use in the pursuit of gain. The designation "capitalism" thus applies to any system which is based upon the gain spirit and permits a large amount of surplus wealth to flow into the hands of enterprisers.

It is customary to speak of our present economic system as industrial capitalism. There are many, however, who fail to recognize that it grew out of a prior capitalism which was centered, not around industry, but around commerce. This nascent capitalism was the logical and natural outgrowth of the Commercial Revolution which completed the disintegration of feudal society. Before any form of capitalism could appear the economic system had to possess certain vital factors.

### A. PREREQUISITES

Some of these prerequisites were acquired early in the evolution of economic society; others appeared at a rela-

tively late date. They may all be summarized under six major headings:

1. **AN ECONOMIC SURPLUS:** In the Temple Town period there appeared for the first time in human history entire social groups with quantities of the basic necessities more than sufficient to supply the whole population, thus leaving a residue, or economic surplus over and above minimum requirements. Although at that time it was used by the two principal exploiting groups of the day for purposes of conspicuous consumption, it constituted in later times the foundation upon which capitalism was built.

The economic surplus grew steadily larger as Temple Town civilizations increased in size and spread their power over the Mediterranean region. By the time of the Roman empire it had reached vast proportions, but only an infinitesimal part of it was ever used for trade and industry. Its principal function was the maintenance of armies and servants for the ruling classes. With the breakup of the Roman empire and the rise of feudalism the economic surplus suffered a great relative and positive diminution. Mature feudalism found the surplus again in evidence. The very existence of a hierarchy of classes was proof of its size. Under this cultural pattern the economic surplus found specific expression in the numerous feudal armies which pillaged the countryside; in the cathedrals and monasteries of Christendom; and in the towns. War, salvation, and craftsmanship were its chief products. Only in the marginal bourgeois centers was an appreciable part of the economic surplus of feudalism used for the acquisition of private wealth through trade. The capital fund was first nurtured by the Hansards and Italian merchants.

2. **THE CAPITAL FUND:** That portion of the economic surplus used for investment purposes was the capital fund. The wealth which constituted this fund was invested by enterprisers in such a way as to bring them a return over and above the sum invested. Before the technique of invest-

ment could appear there had to be a capital fund to invest and a special gain-motivated group in control of it.

The wealth of the merchant consisted chiefly of a stock of goods or of money. This was his capital. It represented wealth over and above the basic livelihood requirements of the merchant. Socially all such wealth constituted a fund devoted to the acquisition of more wealth rather than to the satisfaction of the wants of its owners.

The capital fund is always a part of the economic surplus but never the entire surplus. It is interesting to note that the capital fund has constituted the largest part of the economic surplus in a country where capitalism is banned. Russia's economic surplus has been almost entirely devoted to the building of productive equipment.

3. **BOURGEOIS CONTROL:** The bourgeois group which controlled a portion of the economic surplus and used it for gain rather than for conspicuous consumption thus brought into being both the capital fund and the technique of investment. This wealth was derived from many sources, among which were plunder and pillage, the increments of urban land values due to increasing populations, and, most important of all, the mercantile profits derived from the increasing amount of commerce and trade.

4. **EXTENSIVE MARKETS:** Although a limited amount of trade can exist under conditions of barter and individual bargaining, the volume of trade and commerce implied by a capitalistic state of society presupposes the existence of an organized and regular market. It provides the chief source of gain opportunities and is the focal point where price-determining forces converge.

5. **THE PRICE SYSTEM:** The amount of gain which can be secured depends upon the prices realized in the market. These prices are simply expressions of the relationships which exist between the various commodities and some other commodity chosen as a medium of exchange and generally called "money." Gold and silver are only two of many commodities which have served successfully as



money. But more than a mere knowledge of some kind of money is essential. It must actually be used in sufficient quantities to be regarded as the typical method of exchange. When that occurred society emerged from a stage of barter economy to one of money economy, and a price system automatically arose. Thenceforth pecuniary gains were measured in terms of price within the market.

6. THE STATE: Ancient cultures evolved both private property and contract, the institutions by means of which exploiters controlled the sources of profit and enjoyed the fruits of their enterprise. These constituted the minimum institutional framework of early capitalism but neither private property nor contract could exist without the powerful supporting hand of a sympathetic government. Control over goods is simply possession so long as it depends solely upon the ability of the holder to defend them against all comers. But when the state sanctions the holder in his possession and assumes the function of defending him in his ownership then private property appears. Likewise an agreement between two parties becomes a contract only if the state sets up the conditions surrounding an agreement and assumes the function of assuring the performance of that agreement. Thus, the administration of government was necessary to the creation and essential to the functioning of those basic institutions upon which early capitalism depended.

## B. AIDING FACTORS

A series of events and special circumstances, in addition to the general forces tending to produce capitalism, introduced commercial capitalism as the dominant economic pattern much earlier than otherwise might have been the case.

1. NATIONALISM: Not only did the national government in the late feudal period begin to protect the private property of its citizens more adequately but, as the local

governments lost some of their prerogatives, it took over the enforcement of law and order and particularly the enforcement of contractual obligations. The public finances of the state constituted the first examples of contracts on a large scale. Public loans offered opportunities to wealthy individuals to invest their money in a highly lucrative and reasonably safe way.

With the breakdown of feudal obligations the protection of the country could no longer be accomplished satisfactorily by the services of feudally dependent vassals. As a paid army took the place of the older customary one the resulting pay roll placed a heavy burden upon the revenues of the crown. In times of distress this could only be met by securing loans from the wealthy money lenders, who promptly took advantage of governmental necessity and enriched themselves. The army indirectly aided the extensive commercial ventures of the new capitalism by developing organizing ability.

The combination of religion and government in the form of a state church resulted in the exclusion of "heretics" or dissenters from public office. This encouraged such individuals to devote their entire energy to economic activities, especially trading, which offered the most attractive opportunities.

As more persons entered commercial pursuits and similar gain-motivated enterprises, and as these fields of activity became more important in the national economy, the government took a greater interest in encouraging and regulating them to its own and the national interest. This new policy and the regulations which carried it into effect have come to be known as Mercantilism. Under this system the state encouraged commerce, agriculture, and manufacturing with the intention of increasing the power, prestige, and wealth of the nation compared with others in the disharmonious family of nations. Sometimes the encouragement given to commerce was in the form of monopolies in certain commodities or over the trade of

newly acquired regions. Sometimes the encouragement was given in the form of special privileges or even direct bounties. But always the encouragement was accompanied with regulations which were devised to assure the government that the important enterprises of the country were being carried on along lines compatible with the existing conception of national interest.

Perhaps the greatest aid which the state rendered to the progress of commercial capitalism was the example which it set by its own direct participation in economic enterprises. Under feudalism it had been beneath the dignity of a gentleman to engage in "business" other than the collection of his feudal revenues. Trading for profit was a "low calling" and was engaged in almost exclusively by the peddlers who traversed the countryside with their packs on their backs. Any person who got his livelihood by laboring with his hands or by trading for a profit was not a gentleman and could not become one. But the connection of the highly respected individuals in government service with the large-scale enterprises of the period of commercial capitalism helped to remove this stigma from all low callings not actually requiring manual labor. It required the rough equality of frontier America to transform manual labor into "honest toil" and to open the highest office of government to a rail splitter.

2. FEUDAL WARS: During the twelfth and thirteenth centuries the Crusades kept Europe in an almost constant state of turmoil. Persons were constantly going to or returning from the Holy Land and in some years the stream increased to large proportions. Such mass movements of population required considerable quantities of supplies and frequently made water transportation essential. These services were provided by the bourgeoisie of Venice and Genoa. In addition to the legitimate opportunities for bourgeois profit through the performance of transport services and the sale of Levantine goods there were many opportunities for pillage and plunder. The overland routes of travel were

beset by highwaymen and robbers while pirates infested the sea. It is more than probable that the Venetians received a "cut" of the spoils in many cases. We have already seen how Genoa and Venice laid the basis of their profitable Levantine trade by the assistance they gave the various Crusading armies.

It was Bossuet who remarked that "men do other than they intend." One of the finest examples of what he meant was furnished by Crusaders who neither held the Holy Land, converted the infidels, nor strengthened the Papacy; but who unintentionally stimulated the forces which were revolutionizing their own lives and their European social and economic institutions. The Crusaders brought back not only new products but also new ideas and behavior patterns. The European demand for Levantine goods mounted rapidly. The military campaigns opened up trading privileges and laid the basis for the accumulation of a capital fund in the Italian bourgeois centers. Thus the same process which produced new demands also provided the means for satisfying them. It was a fertile combination for the future of capitalism in the field of commerce.

The Hundred Years' War, like the Crusades, contributed to the rise of capitalism in a number of important ways. It constituted the first important example of war financing on a national scale, and placed such a heavy burden upon the treasury of the King (Edward III) that in spite of diligent efforts to increase the revenues he was forced to borrow from wealthy money lenders, even going so far as to pawn his own and the Queen's crowns in order to get money to pay the troops. It is interesting to note that the war was financed, in part at least, by borrowing, a typically capitalistic method. In order to meet the heavy interest charges the citizens of the country were required to contribute national aids (fees or taxes). Thus the expense of the war included not only its actual cost but also a "carrying charge" for the financing which was provided by those who had the actual cash.

The Hundred Years' War, like wars of more recent times, stimulated industry—particularly the armament industry. The longbow was the principal weapon of the mass of the infantry but the crossbow was coming into use, while gunpowder and cannon were making their initial appearance. The new weapons and military techniques revolutionized warfare in the next century or two, relegated the handmade armor of knightly combat to a place in museums, and established the modern armament industry.

By the end of the seemingly endless struggle those who financed it, those who supplied the armies with food, and those who manufactured war equipment had become much more important in national life, while the nobility had suffered a considerable depletion in numbers and loss of political power. The old feudal system was being undermined and the nobility decimated while the new bourgeois class was increasing in size, wealth, and power.

3. **MEDIEVAL CHURCH:** The prohibition which the Church, with the aid of the secular authorities, enforced against usury had the effect of directing surplus wealth into the channels of commerce rather than into spend-thrift loans. This tended to develop business talent and acumen rather than the simpler techniques of the ordinary money lender, for those who employed funds in commerce and trade had to make opportunities for profitable investment and lucrative transactions. Even the revenue system of the Church itself afforded training in capitalistic techniques, since the revenues collected at a distance from the papal seat had to be transformed into fluid wealth before they could flow into the papal treasury. The technique used then is still a part of the mechanism of international payments today.

4. **INTER-REGIONAL TRADE:** The ravages of the Hundred Years' War hastened the decline of the Champagne Fairs while the introduction of money economy, which has already been discussed, stimulated the establishment of bourses, or markets, upon a regular and permanent basis.

The carrying on of extended trade by the great merchants and the elaborate organization of inter-regional trade by the Venetians and the Hansards all contributed their share toward the breakdown of the local self-sufficiency of the feudal communities and increased the opportunities for the investment of the surplus wealth which was accumulating in the hands of the great merchants.

5. **SOCIAL CATASTROPHES:** The most notorious plague of the entire feudal period, the Black Death of the fourteenth century, seriously disrupted feudal classes, customary obligations, and manorial organization but it was not the only disturbance of importance. Lesser visitations of similar plagues were reasonably common until modern times brought a more satisfactory handling of the problems of sanitation and medical treatment. The famines which visited Europe from the thirteenth to the fourteenth century on an average of seven times per century were probably less destructive of human life and certainly less notorious than the plagues but it is likely that they were equally important. The scarcity of produce in the stricken districts caused prices to rise and thus disrupted the system of just price at the same time that it gave powerful incentives to the traders to invest their surplus funds in transporting produce to the famine-stricken areas. If it be urged that the provision of food for famine sufferers is a humanitarian endeavor it must be recalled that the motive was supplied largely by the profit derived through the high prices exacted from those in distress. The rising commercial profits of the wealthy were thus sometimes wrung from the misery of the poor.

6. **RENAISSANCE AND REFORMATION:** As the Greek classics were rediscovered, the whole intellectual atmosphere of Europe changed; less emphasis was laid upon authority and more upon practical knowledge, thus setting the stage for the appearance of a more experimental and inductive type of science as opposed to the deductive logic of the scholastics. The Reformation brought a shift of authority

from the Church to the state; the former becoming less important and the latter more powerful. Both of these changes modified the social milieu and promoted the concepts, behavior patterns, and institutions of the bourgeoisie.

## II. FIELDS OF ACTIVITY

Since commercial capitalism was a transitional culture it was not given adequate time to develop fully its completed structure. Its evolution was interrupted by the revolutionary technical inventions of the eighteenth century, which paved the way for a newer and more virulent type of capitalism based upon a mechanized and power-motivated industry. Nevertheless, in those centuries which stand between feudalism and industrialism typically capitalistic forms of activity made their appearance.

### A. AGRICULTURE

1. ENCLOSURES: One of the earliest fields in which the capital fund found expression, outside of commerce, was agriculture. From the thirteenth century, wool had found a ready market in the gild-controlled towns of England and Flanders. The main supply of this material had been the large flocks of the manorial lords and the smaller flocks belonging to tenants. In order to augment the grazing land many lords had cleared forest areas and turned wasteland into pastures during the fourteenth and fifteenth centuries but the common pastures and arable fields had not been affected. By the sixteenth century, however, the demand for wool had grown to such proportions as to induce lords to seek more grazing land for sheep. The lords, themselves, were not bourgeois-minded but merely sought the higher standard of living which an increased cash revenue could provide. There were a growing number of gain-motivated individuals who offered the lords attractive rents (ferms) for the use of large tracts of grazing land. In order to receive these rents the lords sought to acquire first the rights of their tenants in the common pastures and meadows, and later,

even their rights in the common strips of the grain-producing fields. The activities of the lords in consolidating these parts of the manor for sheep walks led to the first enclosure movement.

a. EARLY (SIXTEENTH-CENTURY) ENCLOSURE MOVEMENT: The term *enclosure* is misleading. Often the enclosure of fields was not for the purpose of keeping the sheep within a fence, hedge, or wall, but rather to keep them out of the cultivated fields. In the early years it was the arable fields rather than the pastures which were surrounded by enclosing hedges. Such enclosures often appeared prior to the sixteenth century. They were the result of the lords' increasing their flocks and permitting the sheep to graze on the unfenced wasteland. Beginning in the sixteenth century there was another and more important type of enclosure. Feudal tenants held indeterminate rights in those parts of the manor collectively called land in villeinage. The right to pasture five sheep in the common pasture was held by a given villein and could not be changed. Furthermore, the total number of sheep or cattle which could be kept in a given pasture was limited. To permit one villein to increase his sheep or cattle was to infringe on the rights of others. Likewise to increase the total flock or herd by permitting new tenants to enter their cattle on the pasture was to infringe the rights of the original tenants. Custom forbade both changes. If, however, the rights of all tenants in a given pasture were consolidated in the possession of one person then the size of the flocks could be varied so as to use the pasture most efficiently. To exclude all tenants but one by acquiring their rights was to "enclose" the field. A similar process could also be applied to the arable fields.

When the arable land was enclosed for sheep pasture certain serious consequences were encountered. Since the sheep were prevented from straying by fences or hedges only a few laborers were required to tend them and many who had formerly cultivated the fields found them-



selves and their families without any means of livelihood. Some of these went to other villages in search of fields to cultivate, many looked for work in the towns, and others were forced to turn to begging and robbery. Their former huts were permitted to fall into decay and a general appearance of desolation must have settled over some of the villages in which enclosures had affected large portions of the land. Sir Thomas Moore wrote: "Sheep have become the devourers of men . . . "; and Crowley lamented: "Sheep have eaten up our meadows and our downs, our corn, our woods, whole villages and towns."

It may at first seem strange that the manorial system of agriculture which had been so thoroughly dominated by custom could so easily be disarranged. This was made possible by two sets of circumstances. First, a change occurred in the point of view of the lords. During the earlier centuries they knew that security from other lords and from roving bands lay in large numbers of retainers and these required large numbers of villeins to support them. The motive of cultivation, therefore, was subsistence not profit. Crops were produced to eat not to sell; for use not for the market. But as the government became stronger, law and order were better preserved, and the retainers became less necessary. Then during the fifteenth century it was discovered that enclosed fields could be cultivated to produce nearly twice as much as open ones, and the attention of the lord was directed more and more to the profit which might be made by disposing of surplus grain through the available markets. However, the greatest opportunities for profit were offered by the wool trade and the alert commercially minded lords took advantage of this opportunity by turning their land as rapidly as possible into sheep pastures.

Second, the lords who intended to use their lands for profit instead of for subsistence found that the insidious changes which had crept into the tenure system played into their hands. Those tenants who had formerly been

villeins "according to the custom of the manor" were now "copyholders," being so called because they could prove their right to the land which they held, by a copy of the old manorial court records. These listed the duties their forefathers had been required to render in return for the right to cultivate the land. Those who were "copyholders at will" could be evicted any time at the will of the lord. Those who were "copyholders for life" were safe so long as they lived, but at their death the land could be enclosed for sheep pasture instead of being reallocated for cultivation as the custom would have required in earlier days. Those who were "leaseholders," of course, had no rights beyond the expiration of their lease and were easily disposed of. The most secure customary tenants were those copyholders whose holdings were automatically transferred to their sons and to their sons' sons, but even these were not safe. If the lord really wanted to get rid of such a tenant he could raise the rent to a point beyond the ability of the tenant to pay; or he could require a prohibitive "relief" from the tenant's son before receipt of his inheritance. In contrast to these were the "freeholders," who really were very secure in their rights. But although they commanded the full protection of the law they constituted only about one-fifth of the population. The existing tenantry system thus provided the lords plenty of loopholes through which they could escape from the once rigid custom of the manor regarding the cultivation of the arable fields.

The Tudor government, which depended upon the support of the peasantry for its popularity, opposed the enclosure movement. Beginning in 1489 a number of acts opposed the trend toward enclosure. They made it illegal to transform open fields into pasture unless a certain proportion was kept in cultivation. One person was prohibited from keeping more than 2,000 sheep. And by 1580 it was required that cottages be built in a plot of land consisting of at least four acres. This legislation, however, did little more than slow down the trend; it certainly did

not stop enclosures. One of the reasons for the failure of the legislation was the impossibility of administering the acts. Although many of the courts were sympathetic with the peasants they were of little help, since most cases never went beyond the Justices of the Peace who constituted the chief administrative officers. These were unpaid and over-worked officials who were frequently drawn from the ranks of the country squires. Many of the Justices had enclosed lands of their own and such persons could scarcely be expected to show much zeal in enforcing anti-enclosure legislation. But even when the legislation was sincerely applied there were several loopholes which permitted many landlords to escape its full effect. One person could keep more than 2,000 sheep by claiming that they belonged to different members of the family. Landlords could claim that their land had been exhausted by years of grain growing and thus secure the privilege of permitting their land to revert to pasture.

The enclosure movement produced both desirable and undesirable *results*. Among the undesirable ones must be listed the increase of uprooted individuals who could no longer find the opportunity to make an honest living. This class contributed to the shift of population toward the towns. This urbanization tended to intensify the already growing instability of the guild organization and to depress the wages of non-gild workers owing to their relative abundance upon the market. The problems of unemployment, poverty, and poor relief were thus forced upon communities which were both reluctant to recognize them and unprepared to deal with them.

One of the most desirable results produced by the enclosure movement was the improvement in the breeds of domesticated animals. So long as they were permitted to mingle indiscriminately upon an open and common pasture no attempts at selective breeding could possibly succeed. Most cattle and sheep diseases were easily communicated from one infected animal to the entire herd. The animals

upon common pastures were ordinarily underfed because of the overstocking of the pasture. Sheep upon properly stocked enclosures thus produced a larger quantity and better quality of wool. Similarly, the cattle produced more and better meat.

*b. LATER MOVEMENT:* A number of factors extending back into the sixteenth and seventeenth centuries produced in the eighteenth century an enclosure movement of a different type. The rising price levels of the sixteenth century helped the merchant group to accumulate greater profits, while at the same time the dislocation of agriculture caused by the early enclosures was forcing many landlords to mortgage or sell their estates as a means of raising the funds necessary to their town mode of life. Since the opportunities for the investment of funds were rather meager and since there was considerable reputability attached to the ownership of a country estate many of the lands offered for sale were purchased by the rising bourgeoisie. The availability of lands on the market was greatly increased by the dissolution of the monasteries under Henry VIII, who chose to sell most of the hundreds of confiscated manors rather than to retain them and satisfy himself with the income from the lands. This transfer of large amounts of land from the old established classes, the landed aristocracy and the higher churchmen, tended to create a new aristocratic class based not upon the exploitation of land, nor the collection of tithes, but upon the successful conduct of profitable business ventures. Such a group might be expected to regard their new property from the same profit-seeking point of view as they regarded their trading ventures. In trade the successful person was one who had ideas, enterprise, and initiative. Such persons were less bound by the custom which surrounded the stereotyped agricultural scene than those landed aristocrats whose families had been part of the system for generations. They increased rents, enclosed lands, raised sheep, evicted tenants, changed methods of cultivation, and moved, in general,

toward placing their lands upon the most profitable business basis.

The presence of a profit-motivated group of landowners plus the opportunities for a profitable use of capital in agriculture laid the basis for a wave of enclosures in the eighteenth century which were entirely different in their purposes and methods from those of two centuries earlier. The purpose was now agriculture rather than wool growing. Numerous factors had contributed to that change. For century after century the methods of English agriculture had held steadfastly to the open-field system of cropping without substantial change. Although an attempt had been made to cope with the problem of soil depletion by means of fallowing one field each year it had not entirely taken care of the loss of soil fertility, and yields had steadily declined until in some instances they were only four or five times the amount of seed used. The early enclosure movement had tended to halt this trend toward soil exhaustion by increasing the number of sheep and cattle pastured and thereby increasing the amount of manure available for fertilizer.

The population of England was growing and at the same time shifting from the country to the towns, with the result that the demand for foodstuffs was increasing and producing higher prices. The combined effect of greater yields, increased demand, and higher prices made agriculture more attractive and at the same time threw into clearer outline the disadvantages of the old customary methods of open-field cultivation. In addition to the disadvantages previously apparent it now became obvious to many that innovations in agricultural methods could not be successfully practiced by cultivators whose strips were intermingled with those of others using ancient methods.

The method evolved for transforming the open fields into compact enclosures was now more direct and more efficient than any previously used and the results affected such large amounts of land that during the eighteenth century and the

first part of the nineteenth the open fields disappeared and England became the land of fences and hedgerows which her literary men have loved to describe. The first step toward enclosure usually consisted of a meeting of the villagers and landholders involved. In many cases the large landholders were determined to enclose, and expected the opposition of the customary tenants. Custom, indeed, was all that supported many tenants in their claims to the right of pasturage on the commons and wastes, for the Act of 1660 had "converted into free and common tenure all tenures other than copyholds" and by this means "all remnants of feudal tenure were removed, freeing the landlords from the last vestiges of public duties in return for land ownership." In case there was not unanimous consent to the enclosure, as frequently happened, the minority could be forced to permit the enclosure by securing from Parliament a special enclosure act "for dividing, allotting and enclosing the open and common fields, meadows, pastures, and common and waste lands in the parish of . . . ." It was easy to secure such acts for the government was no longer unsympathetic toward enclosures, as it had been in the sixteenth century. This is not surprising, for in the eighteenth century Parliament was composed of large numbers of landowners and wealthy merchants, many of whom had either retired and purchased country estates or had made socially desirable contacts for their families through the marriage of their children into the families of landed aristocrats.

It was easy to persuade such a Parliament to pass private enclosure acts for the benefit of large landowners. During the course of the eighteenth century more than two thousand such acts were passed, and at the beginning of the nineteenth century (1801) a general enclosure act made the process easier and cheaper and eliminated the necessity of a special act for each specific enclosure. This was followed by another general act in 1845, which set up commissioners to examine claims and redistribute land to approved claimants. The process usually took from one to two years

and involved heavy expenses for surveying, fencing, ditching, and road building. This cost sometimes ran as high as £20 per acre on land which could not have been worth more than £25 per acre before enclosure. In spite of the fact that the fencing improved the value of the land and in spite of the continuing increase in land values after enclosure, the immediate requirement was for an expenditure nearly equaling the capital value of the land. This was a sum which small tenants found it difficult or impossible to raise. Many were forced to mortgage their holdings and some were forced to sell outright. Those who were not forced out at once found that whereas they had been able to keep a cow, a pig, and a few sheep on the common pasture and wastelands (to which they had only a long-established claim), they now had only enclosed arable fields and could not keep any livestock. They were thus deprived of milk, butter, cheese, meat, and wool in addition to experiencing a shortage of fertilizer for their fields. In short, they were no longer able to procure a livelihood from their holding and it was little comfort to have received, as some of them had, a cash payment to compensate them for the loss of their former privileges.

England was well started on the way to becoming the country of large landed estates managed on a capitalistic basis. The landed class had no intention of encouraging the retention of small holdings and peasant cottages but preferred to encourage large holdings worked by agricultural wage laborers. Individuals who wished to work for themselves on their own little plots were regarded as "incorrigibly idle" and their homes were described by contemporaries as "most fruitful seminaries of vice . . . instead of schools of virtue." In 1794 the Report on Shropshire contended that "when the commons are enclosed the labourers will work every day in the year, their children will be put out to labour early and that subordination of the lower orders of Society, which in the present times is so much wanted, would be thereby considerably secured."

It must be clearly understood that the social consequence of the eighteenth-century enclosures was not the depopulation of the agricultural areas, as had been the case with certain areas in the sixteenth century, but rather a change of status for the inhabitants of the rural regions. The enclosure movement now presented the customary tenant with one of three alternatives. Either he might stay on the land as an agricultural worker for wages, or he might labor in one of the rural water-powered textile mills, or he might leave the country and seek employment and fortune in town crafts and trades. In either case the open-field system of cultivation had been destroyed forever and the small customary tenant joined the agricultural or the industrial proletariat. Even the few who hung on, for a time, as small farmers with twenty to sixty acres of land, were gradually pushed out during the nineteenth century and their holdings consolidated into larger farms. "And thus the large capitalist farm system which had arisen first on the demesne lands was extended finally to the lands once held by small customary tenants; and the social gulf between farmer and laborer was left bridgeless over the largest part of the country."

2. TECHNICAL CHANGES: By bringing compact plots of land of considerable size under the complete control of a single owner with full power to manage as he chose, the enclosure movement removed the strangle hold of customary methods of tillage from the neck of English agriculture and left the way open for the introduction of new crops and improved agricultural technology. Only those innovations which contributed most to the efficiency and profitableness of English agriculture can be cited.

a. CROP ROTATION: Before the middle of the seventeenth century Sir Richard Weston had introduced clover into England from Holland, but it was at least a century after 1645 before the use of clover in English fields was at all common and the crop was not universally grown until the nineteenth century. The building of a crop-rotation system around the use of clover was probably the most important



single improvement in agricultural technique after the introduction of the plough. *Clover*, like other leguminous plants, has the ability to remove nitrogen from the air, combine it with other chemicals, and store it in the form of nitrates in little nodules on its roots. This process of nitrogen fixation is particularly important for it is very easy to exhaust nitrates from the soil.

There had been several reasons for leaving one field fallow. In the first place the fertility would have declined rapidly without that much needed rest. And in the second place it would have been difficult to harvest all the land if none had been left fallow. The use of clover was better than fallowing for the restoration of fertility and thus removed the principal argument for idle land. Since the harvesting of clover was very simple, when compared with the labor required to harvest a grain crop, the second argument for idle land was largely eliminated. The use of clover thus restored to cultivation nearly one-third of the arable land. This fact and the nearly two million acres of wasteland which enclosure brought under cultivation prevented the enclosure movement of the eighteenth century from causing any considerable depopulation of rural areas in spite of the destruction of small holdings.

Although clover was extensively used as feed for livestock during the winter months there was another newly introduced crop which did even more to make possible an increase in the number of domesticated animals in England. This crop was *turnips*. The cultivation of turnips produced a much greater tonnage of animal food per acre than any other crop grown on English farms in the eighteenth century. The turnip, however, was not new to Englishmen for it had been common in vegetable gardens and as a table dish for some time. In fact in the seventeenth century Sir Richard Weston had attempted to popularize it as a field crop but without success. The value of turnips might have been overlooked for decades had not Lord Townshend become disgusted with politics and retired to his Norfolk

estate, where he presently began to cultivate them on a large scale. He was at first ridiculed and given the nickname "Turnip Townshend" but his prominent position gave considerable publicity to his hobby and his unbounded enthusiasm finally won a growing number of followers to the practice. His enthusiasm was not misplaced since the turnip actually did possess two attributes much needed in English agriculture. In the first place, it was a plant well adapted to clear fields of weeds, one of the scourges of the open-field system. Secondly, its high per acre yield of feed permitted an increase of stock, which in turn produced more fertilizer for the arable fields.

b. IMPROVED BREEDS: As common pasture lands disappeared more attention could be devoted to the raising and breeding of cattle. It had been assumed that hardier strains would result from the crossbreeding of different stocks. This had been more or less automatically accomplished by the promiscuous breeding on the common pastures but had not produced noteworthy results. In 1760 Robert Bakewell of Leicestershire discarded the accepted practices and began to inbreed his stock, using those animals which most prominently displayed the traits he believed most valuable.

He first turned his attention to sheep, and found that the goat-like animals of his day had large heads, long necks, narrow backs, and sloping haunches. Although such an animal produced fair wool it yielded only small quantities of inferior mutton. In 1700, according to Charles Davenant, a carcass of mutton weighed about twenty-eight pounds. Bakewell made such improvements in the stock of sheep by selective breeding that he nearly tripled the average weight of a carcass. The Leicester sheep which he produced are still one of the popular breeds today. By applying the same methods to the long-horned Midland cattle he was able greatly to increase the amount and quality of beef produced. Brilliant though his practical achievements were they were eclipsed by the much greater importance of the technique

which he gave to the world. By selective breeding the qualities of almost all domesticated animals and plants have been greatly improved.

Unlike Weston, Townshend, and most other men who attempted to introduce technical improvements into agriculture, Bakewell found an almost immediate and truly amazing willingness to accept his ideas. Not only did English peers and gentleman farmers seek his advice but important personages from the Continent visited his farm. Even the practical men of his own locality were quick to see the advantages of his methods and in one year he made £1,200 rental on a single ram of his own breeding.

**C. FARM MACHINERY:** One would expect from capitalistically operated agriculture not only new crops and improved livestock but also labor-saving machinery. The eighteenth century does not disappoint us. The figure of Jethro Tull looms large upon the horizon of the dawning capitalistic world as an important pioneer in the field of labor-displacing machinery. The drill invented by him was destined to replace the old method of "broadcasting" seed which had been used since Neolithic times. On fields where grain had been "broadcast," weeds could not easily be removed without injuring the growing grain. His drill automatically planted straight rows uniformly spaced, and after depositing the seed at the proper depth covered it with earth. This made possible the cultivation of the space between the rows of growing grain.

However, Tull attacked this problem also and soon invented a machine for cultivating between the rows. Both of his machines were designed to be pulled by horses and in order to popularize his new methods he published, in 1733, a book called "Horse-hoeing Husbandry." In it he described his thirty years' experiences as a farmer and gave full details concerning the methods which he had carefully worked out and tested. To his surprise and bitter disappointment his book was ridiculed and his advice was ignored. Due to ill health and the difficulty of travel he went into seclusion at

his home, the now famous "Prosperous Farm" near Hungerford. His only son turned out to be a spendthrift and caused the old gentleman further trouble. Although the society which had rewarded Bakewell with fame and fortune gave Tull only bitterness and solitude it could not break his spirit. Just before his death in 1741 he expressed confidence that some day his method of husbandry would become the general practice of England. Posterity recorded the correctness of his vision too late to bring any glow of cheer to his lonely heart.

In the period of early capitalism with which this chapter is concerned the conditions of English agriculture were so modified and altered that the profit motive could find expression and the foundations of modern agriculture be firmly laid. It remained only for the period of fully developed (industrial) capitalism to build upon the work of Weston and Townshend with crop rotations, new crops, and artificial fertilizers, and upon the work of Tull with a long list of improved agricultural machines. But before this process was complete the scene shifted to America and it is here that one finds the fullest development of capitalistic agriculture on the diversified farms of the fertile Mississippi Valley and the great wheat fields of the Western Plains. During the nineteenth century England experienced the rise to dominance of a group of bourgeoisie deriving their profits from industry rather than from agriculture or commerce. Landlords had long controlled Parliament but the Reform Act of 1832 weakened their power and, although they fought valiantly to retain the Corn Laws, ultimate victory was on the side of the rising class. In 1846 the Corn Laws were repealed, thus hailing the supremacy of a new class in English affairs.

## B. COMMERCE

During the feudal period commerce was organized through the device of fairs for inter-regional trade and markets for local trade, supplemented by the retailing activities of

craftsmen in the towns and itinerant peddlers in the country. The dominant motive was not profit but rather livelihood, and the refrain of the moralists that "To every class and every individual God has assigned his sustenance" was often repeated. In spite of strong resistance to change the sixteenth, seventeenth, and eighteenth centuries introduced new egocentric motives based upon pecuniary gain, new business forms, strange financial practices, and novel economic institutions. Even as late as the eighteenth century opposition to the steady march of change had not been abandoned. Marperger wrote in 1717 that "without doubt, at the present day, it must be recognized that all modernization, even when it is advantageous, is distasteful to most people." Respectable people still regarded local price competition with distrust, believed advertising to be shameful, and looked upon the practice of underselling the general market as "the last resort of a faithless merchant." But in spite of the great force of habit, the tenacity of custom, and the perseverance of behavior patterns new features were forcing their way into the old business methods and transforming them.

1. NASCENT BUSINESS FORMS: The sixteenth century provided a social milieu which unquestionably encouraged innovation. The geographical explorations and discoveries, the opening of new gold and silver mines in Germany, Austria, and Africa, the exploitation of the gold and silver supplies of Mexico and Peru, the religious persecution of protestants in France and Jews in Spain, the advance in scientific knowledge and techniques, the appearance of nationalism, the establishment of "law and order," and the increased usage of contracts—all these features and many others helped to disrupt the established order and provide opportunities for new types of behavior and new forms of association.

Perhaps the first type of new behavior was found in the "substantial" or "respectable" *merchant*. With the increased use of contract made possible by a strong central

government and an established court system there appeared a new sort of commercial virtue or business honor which may be summed up in the phrase "faithfulness to contract." Leon Battista Alberti in his "*Libro della Famiglia*" showed a pride in his family's commercial honor equal to that shown by aristocrats in their noble blood when he said, "Never has there been any one in our family who has broken his word given in a contract." Pride in an unquestioned reputation for solid respectability and trustworthiness is the primary virtue of the bourgeois capitalist. Here in the sixteenth century is its origin. Contract, trade, and "business" were no longer regarded with contempt as the petty haggling of a despised group beneath the notice of gentlemen. Businessmen could now take their place and hold up their heads in any society. In fact they frequently married their children into the best families, bought seats in Parliament, and moved in the most respected circles.

For centuries business dealings had been highly personalized. Each merchant traded on his own account, ventured his own money, engaged alone in his various ventures, and absorbed all the profits or losses. One important modification of this personal aspect of business to appear in feudal times was the *family association*, in which the various male members of the family were sometimes included in the business operations. It was from such family associations that some of the largest and most important "houses" of Europe developed. The Fuggers of Augsburg and the Medici of Florence were the best known but the Peruzzi, the Bardi, the Soranzos, the Rulands, the Welsers, the Imhofs, the Hochstetters, and the Baumgartners were not essentially different. The basis of the Fugger fortune was laid, for instance, early in the fifteenth century, when the sons of an Augsburg weaver began to trade in spices and textiles. The famous Jacob Fugger increased the family fortune by doing a money-lending business as well as investing in land and mines. As the early personal ventures increased in importance and expanded in scope they could no longer be

handled even by the members of a large family. It was necessary to handle multitudinous details in many places at once. To meet this need the fully developed commercial houses (such as the great family associations named above) developed great factor systems.

A *factor* was an agent resident abroad who was empowered to represent his principal and to transact all necessary business in his principal's name. This consisted chiefly of selling goods consigned to him and of buying another cargo and consigning it to the next point of exchange. But he also discharged numerous supplementary services such as insurance, exchange, customs, packing, lading, making collections, and establishing business connections. By employing many factors a merchant could conduct a complicated business in many different places, directing and controlling the whole from his central or home establishment. The von Bodeck house of Frankfort bought silk and drugs in Venice, and sent them to Hamburg; iron and wax in Hamburg and sent them to Spain; indigo and wool in Spain and sent them to Amsterdam and Antwerp; and rye in Amsterdam and sent it to Genoa. Such merchants made their profits from wares which they never saw but which they bought and sold in various markets by means of factors.

A commercial house with a great factor system constituted only one of the trends in business associations. If the several members of a family could conduct a business in partnership, why could not several like-minded persons not related by blood conduct a business in the same way? There seemed to be no reason, and the concept of the *firm* began to develop. The establishment of such firms generally took the form of partnerships in which a common signature was legally binding upon all. Indeed, the very word "firm" is derived from the Latin "*firmare*" meaning to sign. As early as the sixteenth century we find French merchants who were members of several such firms at the same time. And in 1673 a French ordinance was passed which dealt systematically with this form of relationship.

As the volume of business handled increased, the factors were replaced by *commission houses*, which bought and sold in their own names rather than in that of a principal. These commission houses, however, did their business for the account and at the risk of a principal from whom they collected a commission. At length these establishments were supplemented by *branch houses* owned by and operated exclusively in the interest of the parent concern. They were not profitable until a large volume of business was continuously transacted in one place. The extensive business of the East India Company, for example, encouraged the establishment of such branches.

2. CHARTERED COMPANIES: The practice of chartering towns during the feudal period has already been described and it is obvious that the technique of chartering was already thoroughly familiar to the government. Charters had already been found to serve well in the elimination of the uncertainties and irregularities that were inevitable in the personalized relationships of feudalism. Charters usually fixed definite responsibility, granted fixed and certain privileges, and assessed known fees. All such items were written down in black and white and stated in so many words for all to see.

It was but natural that this same chartering technique should be mutually satisfactory to the government and to the associations of merchants which were trading overseas, starting colonies, or carrying on any sort of commercial venture in a capitalistic fashion. They desired the grant of privileges—a monopoly if possible; they desired military or naval protection and help in their ventures; they needed financial aid; they wanted the right of political control and governmental authority over the colonies that they founded or the peoples with whom they traded.

But all the advantages were not on the side of the company. The government could more easily make and collect assessments from the responsible central authority of a chartered company than from many individual merchants or



even from such an organization as the Merchant Adventurers, with their loosely affiliated groups in various towns. The processes incident to imperialism, such as the planting and nurturing of colonies, the search for raw materials, and the development of markets among backward peoples, could be effectively handled by companies invested with special privileges and powers through the medium of a charter. The practices of such companies could be adequately regulated and controlled by the enforcement of the provisions of their charters, by a threat of revocation, or by the imposition of fines.

a. REASONS FOR RISE: Inherent in the advantages of the charter to the government and to the company are the reasons for the growth and success of the chartered companies which appeared in all the leading capitalist countries during the period of commercial capitalism. These reasons may be briefly summarized as follows: First, military protection was essential to the successful handling of inter-regional commerce owing to the prevalence of pirates and privateers on the seas and of highway robbers on the land. Second, foreign governments frequently required national responsibility for the honor and trustworthiness of alien merchants dealing under their jurisdiction. Third, in order to protect the interests of the merchants who first organized the trade of a new region against the inroads of late comers, who would often attempt to reap the profits of an established trade without having risked their capital in its establishment, the government frequently gave a monopoly of certain commodities or specified regions. Fourth, the rise of Mercantilism as a national policy favored the organization of commercial companies with extensive rights and powers.

b. FEATURES: Chartered companies had several distinguishing characteristics. They always possessed a charter which specified the rights, privileges, and monopolies enjoyed by the company and which limited the area of its operation. They were usually combinations of private and

public enterprises in that they traded for private profit but were often used by the government to promote its ends, such as the colonization of a new region. They carried on private trade using private capital but they were often permitted to exercise governmental powers over a region or wage war by land or sea. The famous East India Company laid the basis for the English empire in India.

c. TYPES: These chartered companies ordinarily took one of two forms. Some were simple *regulated companies* in which the membership was open to any merchant who paid the fee required and who lived up to the established regulations. Each individual traded on his own capital and made profits in proportion to the amount he invested, the ability shown in management, and the luck encountered. Each merchant had to bear his share of the expenses necessary to the venture such as, the costs of establishment, maintenance, and provisioning of forts. The regulated companies of this period were similar in many respects to the Merchant Adventurers already discussed.

Far more important for the development of capitalistic forms was the second type—the *joint-stock company*. The regulated companies had retained too many features of the medieval guilds to present an entirely satisfactory medium for the development of commercial capitalism. The Merchant Adventurers, for example, had insisted upon a regular apprenticeship for their membership applicants. Some companies which began as regulated companies gradually changed to the joint-stock form. The British East India Company, for example, required nearly fifty years to develop the true joint-stock attributes.

Crude types of the joint-stock form of business association are to be found in earlier Italian commerce, but they did not appear or make any contribution in northern European life until the seventeenth century. The essence of the joint-stock company resided in the fact that its business was financed with capital provided jointly by its members and that the transactions were carried on by the company for

its impersonal profit rather than by members for their personal profit. This central idea underwent a considerable evolution. At first stock was subscribed by those interested in a particular venture. This held advantages over individual trading because of the hazards of sea voyages. Storms, pirates, and mutinous crews were but a few of the dangers to which the lone merchant ship was constantly exposed. Many ships never came back. Even if the voyage were successful the merchant often had to wait a year or more for his ship to return. The unfortunate merchant who had borrowed money in order to fit out his ship was constantly harassed by his creditors and undoubtedly attempted to stall them off by marvelous tales of how well they would be paid "when my ship comes in."

It soon became apparent that the risks suffered by a merchant could be materially lessened if he and several other merchants pooled their capital and sent out three or four boats instead of just one. Then if one or even two of the boats failed to return no merchant lost everything. The goods which did reach the home port could be sold and the proceeds distributed to each participating merchant in proportion to his contribution to the original capital. Since no merchant was likely to put his whole fortune into a single joint venture he could distribute his capital fund among several such ventures. The widening opportunity for investment increased the need for additional capital.

It was at this point that the joint-stock company made its first contribution. The effort to accumulate adequate funds to carry on trading ventures with distant lands in sufficient volume placed a strain upon simple associations. The joint-stock method facilitated the subscription of capital. To each subscriber was issued a written certificate stating the amount of capital he had provided and the proportion of the profits he might ultimately claim. All the detailed management of the affair, of course, fell into the hands of the officials of the company. They secured the ships, hired the officers and crew, directed the loading of the cargo,

determined the ports of call, and directed the trading during the course of the voyage. However, as soon as the venture was completed and the costs paid each merchant's capital was returned to him with whatever proportion of the profits he was entitled to receive. In the case of the Russia and the East India Company, with business transacted halfway around the globe, the ventures were at first operated on a joint capital which was subscribed and resubscribed for each succeeding voyage or venture.

Experience showed the difficulty of separating accounts of each voyage and demonstrated the advantages accruing from the organization of a permanent capital fund used to finance continuous trading. From the profits of such a continuous venture reserves might be set aside for emergencies and capital equipment might be supplemented by using some of the earnings to build wharves, warehouses, or forts. The management could make periodic distributions of earnings to those who had provided capital for the venture, such distributions being in proportion to the amounts of capital provided. The permanent capital fund did not seriously inconvenience any merchant for if one individual needed his funds he could sell some other merchant his right to participate in the future distributions of profit. In other words, "shares" in the company became negotiable and there presently appeared specialists who dealt in such securities.

Perhaps it will be well to summarize the chief features of the joint-stock company which made it superlatively well designed to promote the development of capitalism in commercial and later industrial enterprises. First, it permitted permanence of operation. Even though an individual shareholder might die or withdraw from the venture the continuity of the company's operations need not be in any way affected. His interests were simply transferred to his heirs or sold in the security exchange to another capitalist. Second, it permitted an accumulation of large quantities of capital from wide and varied sources. Unlike the require-

ments of a partnership, the contributor of capital to a joint-stock company did not have to be skilled in the trade or versed in the detailed knowledge of the enterprise. The business was conducted by hired managers, agents, factors, commission houses, and branches. The actual control of the business was vested in the hands of a board of directors chosen by and responsible to the shareholders. Periodic reports concerning the state of the company's business were required from the board and if these were unsatisfactory to those who had contributed the largest proportion of the capital they had the power to change its membership. Third, both control and risk bore some relation to the amount invested. The investor risked only the amount paid into the company or to another for his shares, not his entire personal fortune, as was the case with partnerships.

d. **EXAMPLES:** Great numbers of examples of the joint-stock type of organization may be found both in England and on the Continent during the period of commercial capitalism. Perhaps the first in England was the Russia Company. Its charter, among other provisions, created "the mystery and company of the Merchant Adventurers for the discovery of regions, dominion, islands, and places unknown . . . ." This intent to discover new lands and then to colonize them was carried further by later companies, especially the London Company and the Plymouth Company chartered in the early seventeenth century. It was but natural that the provisions contained in the company charters should be extended in more or less modified form to the colonies which they governed. The charters of several of the original thirteen colonies were greatly influenced in this way and through them the influence was carried on to the state constitutions which replaced the original charters. Colonies were of great interest to the governments of Europe because they fitted in with mercantilistic principles and imperialistic policies. They interested the companies because of the profits to be made in colonial trade. The Levant Company (1581) was concerned primarily

with the trade of the Mediterranean area. The British East India Company (1600) devoted its energies to the government and trade of India and neighboring regions. It was followed in 1602 by the Dutch East India Company, a dangerous rival. The interest of government in such ventures and the actual financial encouragement given is well illustrated by the French East India Company, to which the king subscribed 6,000,000 livres while private capitalists subscribed only 2,000,000 and the merchant gild only about 650,000. The slave trade was exploited by the Royal African Company (1662), while fur and colonization occupied the attention of the Hudson Bay Company (1670).

Most of the early joint-stock companies secured their capital from a relatively small number of persons. Only four of the forty-nine companies chartered before 1680 in England had more than one hundred shareholders. On the other hand the device was capable of great expansion, as was early demonstrated by the fact that both the African Company and the East India Company had from 900 to 1,000 members. Such joint-stock companies were the forerunners of the modern corporation.

3. BUSINESS TECHNIQUES: Along with the new business forms which culminated in the chartered companies there developed a series of new techniques which were either essential to the development of capitalistic methods or the result of their application.

a. ACCOUNTING: The removal of the personal element in business required the development of impersonal accounts which would record the financial progress and make possible the mechanical conduct and control of a business rather than leaving it to the ability and acumen of each person involved. Accounting "reduced the gain idea to an abstraction by putting the profit in a specific form, a definite sum of money, in contrast to the natural aim of subsistence which was in the forefront of the medieval businessman's mental attitude." It was this abstraction of profit that first made the concept of capital possible.

The capitalistic businessman was able to formulate his goal and then by a study of his accounts to judge how nearly his actual performance was attaining it.

Simple forms of bookkeeping and business records had been known long before the advent of commercial capitalism but, being largely the notations made by a businessman as an aid to memory, they were neither systematic nor scientific. It must be recalled again that until after the advent of printing only a small minority could read and write and that these were the nobles and churchmen. The peddlers, merchants, traders, and craftsmen were generally illiterate though they did not lack shrewdness.

Systematic bookkeeping apparently invaded Europe from the Mediterranean, where the merchants who engaged in extensive commercial ventures found some form of records essential to their success. In Florence in the fourteenth century there were six schools where boys might learn to "reckon." The total number of students under instruction ran as high as a thousand or more. In the fifteenth century there were schools which taught how to compute interest and discounts. This elementary education was a considerable help in the establishment of bookkeeping methods in the Italian commercial houses, which followed the lead set by the city governments and the papal treasury. The Italian bankers, who were closely affiliated with such governments as those of Venice, Florence, and Milan, were familiar with the methods employed for the control of their finances and adopted similar systems in their own affairs.

Having once begun the keeping of systematic records the next achievement was the introduction of the double-entry method. The year 1494 brought the publication of a systematic exposition of double-entry methods by Fra Luca Pacioli. It was particularly appropriate that just as the Commercial Revolution began, the nascent capitalistic economy of Europe should be equipped with one of its most important tools. The system did not provide for the striking of balances at regular intervals. This feature was added in 1608 by a

Dutch merchant, Simon Stevin, who challenged the notion that a balance sheet needed to be prepared only when a member of the firm died or when the business was dissolved. The idea of an inventory was apparently not introduced until near the end of the seventeenth century. Savary in the Ordinance of 1673 probably deserves the credit. The introduction of arabic figures, in the sixteenth century, greatly aided the progress of arithmetical education and enormously reduced the difficulty of making computations in the Roman numerals, which did not include a zero. In fact, the zero was so important that one twentieth-century writer was led to assert that practically all modern science was founded upon "nothing"!

The second decade of the sixteenth century brought the first publications regarding bookkeeping (in Germany), but the first English text on double entry did not appear until near the middle of the century (1543) and not until 1588 did the historic "Manual of Reckoning, Ciphering and Bookkeeping" by Nicholas Petri Van De Venter appear in Holland. The Commercial Revolution had shifted the seat of commercial greatness from the Mediterranean to the Atlantic and, once started, the Dutch quickly assumed the lead in accounting methods and displaced the Italians. In the seventeenth century alone more than four hundred books on accounting appeared in Holland and since that time there has been steady progress in the technique by all advanced capitalistic nations.

b. CAPITAL ACCUMULATION: The clarification of the concept of capital which accounting permitted was not enough. Large accumulations of actual capital were required before new techniques and forms of association could really transform sluggish feudal institutions into anything closely resembling modern economic organization.

This new capital came from a variety of sources. The first important group to accumulate surpluses for capitalistic investment or pecuniary manipulation were the merchants. They had never constituted a really integral part of



the feudal system and easily broke away from its restrictions. When banking was combined with commerce, as was sometimes the case in the great family associations, the accumulation of great sums was possible. The Peruzzi house of Florence, for example, had accumulated a fortune estimated at about \$800,000 in 1300. The more famous Medici had about \$7,500,000 in 1440. But the multitudinous interests of the Fuggers were apparently still more profitable, for their fortune in 1546 is believed to have approximated \$40,000,000. These cases are, of course, exceptional but there were unquestionably hundreds or thousands of lesser merchants who, either trading individually or as members of a regulated company, found that their incomes were in excess of their necessary living expenses. They were in short making more than a livelihood.

More important than the size of these accumulations is the character of the persons who possessed them. They were gain-motivated individuals who, instead of using their surplus funds for luxurious living or conspicuous expenditures, sought ways to employ them profitably. Their efforts were considerably facilitated by the appearance of a money economy and the growing stock of precious metals which had resulted from the discovery of gold and silver in the New World. The ability to transform surpluses into cash made them fluid and increased the ease with which investment capital could flow from one employment to another. The changes in agricultural methods and organization likewise placed in the eager hands of an increasing number of landholders capital surpluses which they were free to employ for profit.

Less respectable and more colorful methods of accumulation were also an integral part of the process. The age was one in which the restraints of an established social pattern were weakening, and in which a whole newly discovered world held out to those who were daring and unscrupulous the rich rewards of plunder and booty. Natives from backward lands could be seized by force or ensnared by cunning

and transported to the colonies, where labor was scarce and slave prices high. What mattered it if trickery, war, murder, or inhumanity were a part of the process if only the rewards were great enough? The cruelties, starvation, disease, and deaths aboard the slave ships in the "middle passage" were common knowledge. English merchants were leaders in this nefarious trade. In the year 1786 alone Liverpool ships handled over 30,000 slaves and made a profit of more than 1,000,000 dollars! It was not infrequent for slave traders to make a profit of 1,000 per cent!

Once established the chartered companies themselves contributed enormously to the concentration of capital. The purchase of pepper, for example, in the Spice Islands for a small sum (frequently in the form of merchandise) and its sale in Europe for ten times that amount could scarcely have any other effect than the accumulation of capital. The Dutch East India Company was typical of the whole group of East India companies in the enormous profits realized. Over a period of two whole centuries it paid an average of 18 per cent in addition to the large payments to the government, the enormous expansion of its original capital, and the extensive but unknown amount of theft by its own officials. The extensive fortunes which Clive and Hastings brought home are indicative of the extent to which the whole company structure was honeycombed with private graft and corruption. The knowledge of how the representatives of the fur-trading companies swindled natives out of valuable furs by offering in exchange worthless trinkets is so commonplace that it has ceased even to excite surprise and is accepted as the proper standard of morality to be adopted by those dealing with backward peoples. These same furs brought handsome prices in the markets of Europe, and the profits thus realized laid the basis for the capital accumulations of the companies involved as well as the private fortunes.

But the gain spirit, once loosed, could not be easily restrained within the bounds of these "legal" enterprises.

The new nations were applying force in a long series of wars. Chartered companies were privileged to do the same. Why should not private individuals follow their example? A great increase took place in freebooting, plundering, and piracy. Along with that criminal crowd went the privateer, a legalized pirate, authorized by his government to prey only upon the commerce of his nation's enemies. Piracy, however, was not new. Genoa and Pisa owed their wealth to their piratical exploitation of the Mediterranean. Venice plundered the cities of the East, especially Constantinople. In 1511 Albuquerque returned from Malacca with a booty of 1,000,000 ducats, 20 per cent of which he turned over to the Portuguese king. The Spanish had discovered and looted the amazingly advanced civilizations of the New World in Mexico and Peru and then put the natives to work in the mines to produce more booty. The transportation of this loot to Europe held out opportunities to pirates and privateers which were irresistible. To build up a fortune in a few years through the profits of trade was good, but to seize undreamed-of wealth in gold and silver by one bold stroke was still better. The Caribbean Sea in the vicinity of the West Indies swarmed with pirates. It is estimated that in 1717 the coasts of the Carolinas were infested with nearly 1,500 pirates.

The names of illustrious, or perhaps notorious, Englishmen are not lacking. The exploits of Hawkins in preying upon the Spanish galleons carrying the booty wrung from Mexico and Peru toward Spain diverted a part of that golden stream to England, where even the crown was glad to share in the loot. Perhaps the brightest star in the whole galaxy of English rogues is that of Sir Francis Drake, adventurer and nobleman. Hammond describes him as the "scourge and terror of mankind who welcomed new discoveries because he longed to set his savage heel upon the wide face of the world." His success in plunder and pillage is famous. His cleverness in outwitting his enemies on one of his looting expeditions by circumnavigating the globe is well known.

It is not generally known that the English sovereign, Queen Elizabeth, shared Drake's booty, and that the great Levant Company was partly financed by money derived from his exploits. The Queen loaned the company £40,000 after his return from his world-circling jaunt. The company had been chartered in 1581 to carry on trade with the Mediterranean area but political attacks, an increase in the English tariff on currants, and the successful attack of Spanish privateers upon its boats had hindered its trade. After twenty years it abandoned the joint-stock form for the structural organization of a regulated company. At this moment some of its chief members decided to use a portion of the capital thus left temporarily idle to finance the organization of the British East India Company, the first minutes of which actually appear in a letter book of the Levant Company. Thus it is symbolic of the age that the ruthless and highhanded methods of the British East India Company in India were based in part upon the loot secured from Drake's piratical voyages.

When there is robbery upon the high seas and stealing in private business there is apt to be corruption in public office. We learn from the trial of Sir Francis Bacon that English judges expected to receive bribes from both parties to disputes. We find officials in Spanish Naples retiring with great wealth after a period of service at salaries of only 600 ducats a year. Pierre Remy, the French Superintendent of Finances, died in possession of a fortune estimated at \$14,000,000. The words of Aeneas Sylvius in describing the chancery of Emperor Frederick III as "a hungry crowd, who turn every opportunity to the greatest possible advantage" might have been applied to public officials in almost every rising capitalistic country. We are forced to admit with the Hammonds that the discovery and exploitation of the New World by a money-mad Europe was followed by irreparable evils: the massacres in Mexico and Peru, a great extension of piracy, a long and exhausting series of wars, a heartless slave trade, and a ruthless pillage in India. Instead of

making a better world, the gain spirit made a worse one. Nevertheless, out of political corruption, private graft, privateering, piracy, deceit, forced labor, robbery, plunder, and pillage came accumulations of capital which helped to lay the foundations for the greater enterprises of capitalism.

c. **MARKETING:** It was inevitable that as the other forms of business organization become more complex and more highly integrated, the methods of making exchanges should also undergo a similar development. Settled retailing was fully established in important towns in England and western and central Europe by the eighteenth century. One commentary was to the effect that "thousands of people have given up farming and taken up shopkeeping without having learned the business." There were not more than fifty or sixty mercers in London in 1633 but by the opening of the eighteenth century there were more than three hundred. There had been also an enormous increase in the number of linen drapers. It is certain that the number of retail establishments increased at a rate which was more rapid than the rate of growth of the entire population during the seventeenth and eighteenth centuries.

As the number of shops increased certain ones began to specialize. This specialization seems to have proceeded upon several different bases. One classification was according to the use of the articles offered for sale. For example, one shop would specialize in household goods and another in "expensive trifles for the ornament of the fair sex." Other shops seemed to use the method of measurement as a basis of classification, some specializing in pound goods, others in yard goods, and still others in piece goods.

Fairs and markets were rapidly losing ground as methods of retail and even wholesale merchandising. Auction sales appeared as a transitional form which replaced them and later ushered in settled wholesaling in the form now known. The East India Company, for example, frequently sold its imports "by the candle." That is, when one of their ships arrived in port it was announced that at such a time and

place certain goods would be sold. Those interested gathered there and offered bids upon each item or consignment as it was put up for sale. New bids were accepted until the official auctioneer's candle had burned down to a designated mark. When that mark disappeared the goods were knocked down to the highest bidder. It is easy to imagine the auctioneer, in his effort to stimulate his audience to make one more bid, looking at the candle and describing the mark as "Going, . . . going, . . . gone!"

In many towns there were "halls" which had been built in earlier centuries to house occasional markets. In them merchants had gathered on the appointed day to dispose of their goods. As time passed many merchants found it impossible to appear in person but sent their "agents" to represent them. The practice of selling by agent combined with the practice of "country buying" ultimately destroyed the function which had been performed by fairs and markets. Some purchasers of grain in France and England in the seventeenth century began to send their agents directly to the farms to purchase grain without waiting for it to appear at the market or fair on the appointed day. English "broggers" made a similar farm canvass for the purchase of wool. When customers had become accustomed to buying and producers to selling goods through agents it was easy for these agents to maintain permanent booths at the "hall" and to discharge the functions of jobbers. Settled wholesaling was an established fact.

From these practices it was not a very difficult step to contract buying and dealing in *futures*. In 1699 the farmers of France avoided the inconvenience and fees of the Paris grain market by taking only a few bags of grain to the market. From these they took a pouchful as a sample. They managed to meet prospective buyers in the streets outside the market or over a glass of wine in the café. There they displayed their sample and arranged to sell the whole supply which they had left at home. Then they went into the market and over their few bags of grain pretended to

make the transaction. The purchaser took away a bag or two but later collected the much larger quantity from the rural home of the farmer with whom he had made the contract in the café. A contract providing for the sale of goods to be delivered at a future time is so closely related to the selling of grain by sample as to be practically indistinguishable. The principal difference is that such a future sale might apply to almost any type of goods.

The field in which contract buying and selling had its earliest general use was in the provision of army supplies. As the feudal method of army maintenance broke down, some other satisfactory method had to be substituted. During the seventeenth and eighteenth centuries the contract system came into use in all the advanced military powers of Europe. By the eighteenth century the central government in each nation was not only providing weapons and ammunition for every soldier in its rapidly growing standing army but all three of the necessities of life, food, shelter, and clothing, as well. Contracts for the delivery of all the necessary provisions were let to private merchants or businessmen who then undertook to provide the items required at the prices specified. It was the growth of national militarism that made contract buying "big business" and opened the way for private graft on government contracts and private profit through the sale of munitions for the slaughter of thousands.

## C. FINANCE

It is not surprising that the development of new commercial forms should be accompanied by the appearance of new financial techniques. The increasing commerce of the late feudal period had necessitated the introduction of a money system of exchange in many segments of the economic order.

1. **MONEY CHANGING:** Since the introduction of money at fairs and markets had preceded the appearance of coinage

as a prerogative of national governments, the greed of local authorities often expressed itself in the frequent debasements of the coins. These anti-social practices on the part of a few made it impossible for the remainder to adhere to strict standards. The situation was further disturbed by a tendency on the part of the public to remove full weight or "honest" coins from circulation by hoarding and to keep debased ones in circulation.

The chaotic and unsatisfactory condition resulting from local coinage systems was further accentuated by the lack of uniform standards. Each district had a standard all its own and even this was not retained consistently but was subject to uncertain and unannounced modifications. Because of the very great number of different coins counterfeit issues were hard to detect and even more difficult to prohibit. The coins of one locality were not sufficiently familiar to the inhabitants of other regions to permit them to detect fraudulent coins quickly and easily. And the lack of a central government rendered the control of issues and the punishment of offenses ineffective. Even official coins were frequently of doubtful value owing to the processes known as "clipping" and "sweating." By these means certain persons acquired considerable amounts of gold and silver by taking a little from each coin which passed through their hands. The coins thus tampered with were of course lightweight. They became so numerous that merchants found it necessary to weigh each coin and accept it only at the value of its actual precious metal content.

Under such circumstances money changing became a highly specialized function performed by persons having extensive knowledge of the exact weight of each coin issued and the ability and means of quickly detecting counterfeit and mutilated coins. This specialized knowledge and the ignorance of the general public enabled many an unscrupulous money changer to line his own pockets. Coined money became a more reliable medium of exchange as the national governments brought order out of con-



fusion by simplifying the coinage system and suppressing counterfeiting.

2. **BANKING:** The important institution of banking did not become an integral part of the social pattern until the period of commercial capitalism. Its roots may be traced back to the Italian money changers and to the English goldsmiths. An individual who worked in precious metals found it necessary to keep considerable quantities on hand and because of their high value had to provide a place of safekeeping. Persons with plate, jewels, or money in their possession often paid goldsmiths to store their valuables for safekeeping. The goldsmiths presently found that at any given time they had a considerable amount of deposited money on hand and that a small proportion of it was sufficient to meet the demands of those who had left such deposits, for only a small number of depositors was likely to demand the return of their money at any one time. The remainder of the money could be loaned out at interest. Thus although it belonged to the depositor, it could be made to earn an income for the goldsmith. When this technique had been developed the competition to get deposits led to a reduction of the fees charged for the safekeeping of a depositor's money. This went so far that some smiths paid the depositor a fee to encourage deposits. A similar practice is now followed by our banks in paying interest on deposits in savings accounts. This led to the practice of issuing deposit receipts, which evolved into our modern bank notes.

Suppose that John Doe, an individual, made a deposit of £100 with goldsmith Jones and received a receipt stating the amount deposited. Later Doe purchased £100 worth of goods from Richard Roe, a merchant. John Doe could go to the bank and get £100 by presenting his receipt but it was much easier to present the receipt to Richard Roe and let him withdraw the money whenever he wished. However, instead of going to the bank Roe often passed the receipt on to the wholesaler when he replenished his stock. And so the receipt passed through many hands before being presented

at the bank for payment. Soon the wording on these certificates took the form of a note in which the bank promised to pay to the bearer a specified sum upon demand. The notes issued by our national banks and our Federal Reserve banks represent the outgrowth of this early practice. Americans are so confident of the ability of the banks to make good upon their promises that they never present the notes for payment but go on year after year using them as though they were valuable pieces of money rather than almost valueless pieces of paper containing only a promise of future payment.

Although the banking system had developed three of its most important functions, receiving *deposits*, making *loans*, and issuing *notes*, it needed some method of organization which would coordinate the activities of the many small banks and produce a banking system. One of the earliest systems arose in 1694 with the establishment of the Bank of England. The need to finance a war with France was the immediate cause of its establishment but its primary functions were to perform essential financial services for the government and to centralize and control the banking structure of England.

3. PAYMENT BY DRAFT: One of the means by which a merchant could make payment was the draft. One merchant who owed a sum of money to a second merchant simply gave him an order upon a third who owed the first merchant a sum equal to or larger than the amount involved in the draft. There were two principal disadvantages to the use of such drafts. First, the draft could only be collected by going to the town in which the merchant drawn upon resided. Second, the draft was not negotiable. The combination of banking and the use of merchant drafts made possible the appearance of a new type of draft drawn upon a bank instead of upon a merchant. Since these were acceptable to people generally, owing to the known reputation of the bank, they enjoyed a limited type of circulation. Drafts of small denominations often had a hundred en-

dorsements when finally presented for payment. The use of bank drafts was becoming general in the sixteenth century, and by the close of the eighteenth century many communities used them in a majority of their exchange transactions.

#### D. THE DOMESTIC SYSTEM

The field of textile manufacturing was one of the first in which a new and typically capitalistic system of production appeared. Since much of the actual labor of production was carried on by independent workers laboring in their own homes it is generally referred to as domestic industry to distinguish it from the preceding handicraft system, in which production was controlled by craft gilds.

1. ORIGINS: All the factors which contributed to the decline of the gild system can in one sense be regarded as contributing to the growth of the domestic system. But three factors specifically produced the circumstances attending its rise. First, the Commercial Revolution resulted in an increased demand for goods beyond the power of the gild system to meet. Increasing quantities of production took place outside the gild system. The expansion of the markets for English goods likewise required more extensive and more highly organized merchandising activities than was characteristic of the gild system. Second, the enclosure movement of the sixteenth century resulted in a migration of dispossessed tenants to the towns. These could not be entirely absorbed by the gild system and many, therefore, sought employment outside its organization and jurisdiction. Third, the many specialized stages in the woollen industry provided ample opportunity for the rise of middle-men. The coordination of these various stages offered opportunities for gain to those possessing adequate capital and ability.

A brief delineation of the most important types of marketing specialists in the wool industry will illustrate the situation and clarify the functions of the middlemen who appeared. Broggers were specialized wool buyers who

made a farm-to-farm canvass. Jobbers were wholesalers of wool. An entire year's supply of wool was made available on the market during one month in shearing season. Since clothiers wished to buy small quantities at short intervals throughout the year jobbers bought up the available supply at shearing season, stored it, and sold it on the market to clothiers in small quantities as they required it. The clothier was an entrepreneur who directed the various processes of production and coordinated them in such a way as to make a profit for himself. He was the chief director of the domestic system as it applied to the woolen industry. A factor was an agent. The clothiers frequently disposed of their cloth through factors, such as drapers and mercers, who were specialized wholesale dealers.

2. THE ENTREPRENEUR: The actual processes of production were carried on by the spinners, weavers, dyers, and fullers, but these groups were separate and more or less unrelated. It was in the direction and coordination of these separate processes that the clothier performed his special functions. All the steps from wool to cloth were under his control. He bought raw wool from jobbers and took it to spinners. When they had transformed it into yarn the clothier collected it, paid them for their labor, and took it to the weavers. These in turn he paid for their services in changing the yarn into woolen cloth. The dyers and fullers each performed their specialized services upon material supplied by the clothier and were paid for their labor by the piece. In each case the material belonged not to the craftsmen who worked upon it but to the clothier who finally disposed of it in the market through a factor.

The *clothier* performed three distinct functions. First, he directed all the manufacturing processes from the raw wool to the finished cloth. He determined policies, dictated quality, and controlled the details of the manufacturing process, adapting them to the changing demands of the market. Because he employed and paid large numbers of workers he was one of the wealthiest and most powerful

figures in the district. Secondly, he was a middleman. He did not take part in any of the techniques of production, but merely bought supplies of wool for fabrication and made contacts in the market for the sale of the finished cloth. He related each stage to the next and supervised the transmission of product from one group of specialists to the next. Finally, the clothier was a capitalist. He owned the materials which he put in the hands of artisans for fabrication and sometimes even the larger machines such as looms. About the middle of the sixteenth century an English law declared that "rich clothiers do oppress the weavers . . . by engrossing of looms into their hands and letting them out at such unreasonable rents as the poor artificers are not able to maintain themselves by and much less their wives and families."

3. FEATURES: There are five important characteristics which distinguish the domestic system (or putting-out system, as it is sometimes called) from the conditions which preceded and followed it. First, the increasing importance of capital in industry as well as in commerce is well illustrated by the rising power of the clothiers. They required the use of considerable accumulations of capital in order to advance money wages to a large number of craftsmen long before a cash income could be realized from the sale of the finished product upon the market. Large sums were also tied up in raw materials and machines.

The union of agriculture and manufacturing is the second and probably most characteristic feature of the domestic system. Production was not carried on as it is today in a central workshop or factory. Instead, the worker's home provided the place where the father and other members of the family performed the tasks which secured their livelihood. But the money wages thus earned supplemented real wages in the form of food grown on the plot of ground surrounding the cottage and derived from a few domestic animals. Many modern writers feel that the decentralization of industry so that manufacturing

processes could be carried on in the country during the slack seasons of the local agriculture, is an ideal situation which we ought to strive to recapture.

A feature which distinguished the domestic worker from the gildsman was his relation to the materials upon which he worked and to the market where they were ultimately sold. The gildsman had employed himself by working upon materials which he owned and had derived his income from the market by selling the finished product of his skilled hands to the ultimate consumer. The domestic worker, however, owned neither the materials upon which he worked nor the product which he produced, and had no contact with the ultimate consumer. He had no opportunity to derive a profit from the favorable sale of his goods and could only secure pay for his labor in the form of piecework wages. Whatever profit there might be in the sale of the finished cloth was seized by the capitalist entrepreneur. Of course the specialists who handled the marketing of the cloth developed more complex methods than were typical of the gildsman's relation to his customers. In fact it was the inability of the gild organization to deal with the problems of a widened market which helped to assure the success of the domestic system. The worker also gradually lost ownership of the tools with which he worked. This process began early in the domestic system but it was not until after the Industrial Revolution that practically all laborers lost the ownership of the tools and machines with which they worked.

The predominance of tool methods is the fourth feature of the domestic system. This distinguishes it sharply from the power-driven machines of industrial capitalism ushered in by the Industrial Revolution. Hand-driven tools were consistent with the performance of tasks in the home where the sheer bulk of power-driven machines made them impracticable.

A fifth feature of the domestic system was the extensive division of labor involved. Each process was performed by

a separate specialist. It might be expected that the application of capitalistic methods to cloth manufacturing would produce a system of many stages supervised and coordinated by a gain-motivated entrepreneur. This domestic system stands in sharp contrast to the simple method whereby a completed garment was produced from the raw wool by American frontier families during the same historical period.

4. EVALUATION: Westerfield contends that the principal merit of the system lay in the concentrated direction of the entire process by a clothier who coordinated a well-defined division of labor. It is certainly true that most of the capitalistic features of the system and its successful operation depended almost solely on the clothier. The activity and prosperity of his whole neighborhood depended upon him, for he was the chief employer and paymaster of the whole area. The feature of the domestic system which has received the most favorable comment, however, is the use of the workman's own home. Many writers have felt that the ability of the worker to supplement his money wages with the produce of his own truck garden and livestock constituted practical utopia. There is no doubt that these features were definite merits but these were offset by many unfavorable features.

In the midst of an economic system dominated by factories it is natural to assume that work done in the home is less toilsome and somehow more desirable than work done under the eye of a foreman at a speed prescribed by the tempo of the machine process. The advantages of home-work seem to have been grossly exaggerated. The domestic workers of eighteenth-century England complained of many of the same things that factory workers complain of today: unemployment, unfair competition, low wages, and excessively long hours. In the matter of hours they seem to have had more to complain of than modern workers for we read that "The hours of work, in most handicraft trades, are from six in the morning till six at night: but

the journeymen tailors' and staymakers' hours of work exceed that time by two hours." The domestic system also involved the use of child labor much in the same way that "sweatshops" now involve it. All members of the family assisted the father. Furthermore, they were in a poor bargaining position, for their labor was not at all indispensable to the clothier, who could hire some other family to take their place if they held out for higher wages. Competition for work was frequently so keen that the artisans found themselves bidding against each other for the privilege of working for the clothier. Sometimes the "truck system" of payment in kind instead of in money was used by the clothier, much to the disadvantage of the workers.

The chief disadvantage of the domestic system from the point of view of economic organization was the waste involved in repeated handling and transportation of the partly processed goods between the various stages of production. This defect was not remedied until power machinery provided the technical basis for the concentrated production methods of the modern factory.

### III. SOCIAL CONTROLS

The social controls of commercial capitalism, like those of every other culture, were divided into two groups: formal and informal. The power of the central government supplemented and to some extent displaced that of local communities in such matters as the administration of justice and the maintenance of law and order. Church concepts and precepts, somewhat modified but still powerful, continued to affect people's thinking and to mold their conduct. These were challenged or actually superseded by the attitudes of the rising bourgeoisie. Among these were to be found the gain spirit, the desire for accumulation, a pecuniary basis for the evaluation of success, the love of power, and the beginning of individualism. But more important than any of these was a social control which



combined formal governmental authority with the bourgeois point-of-view.

### A. MERCANTILISM

Mercantilism was the economic aspect of the general movement toward a united and powerful state. It represented the union of bourgeois objectives with the power and authority of absolute monarchy. It did not consist so much of a systematic exposition of a body of theory as it did of the practices and policies favored by practical business men.

1. ORIGINS: Mercantilism originated in two powerful and contemporary circumstances: the growth of nationalism, and the ascendancy of the bourgeoisie. It resulted from the use of the power of the central government to achieve the objective of a wealthy and powerful state according to principles enunciated by the gain-motivated middle class.

2. PRINCIPLES AND PRACTICES: To the bourgeoisie it seemed obvious that the greatness of a state must rest upon two basic factors: a prosperous foreign trade and the possession of a large stock of precious metals, available either for use as a war chest in the protection or extension of the national interest or for investment in enterprises contributing to national wealth and welfare. Around the basic concerns of foreign trade and precious metals were clustered a whole series of principles and practices believed to contribute to the general objective of the creation and maintenance of a powerful nation.

a. PROTECTION TO AGRICULTURE: It was regarded as essential to have an adequate supply of food within the country both for the regular support of the population and for the provisioning of soldiers. The policy was to favor a self-sufficient society, thus eliminating dependence upon other nations, a dangerous situation in case of war. The Corn Laws are an outstanding example of the encouragement given to agriculture in England.

**b. ENCOURAGEMENT OF POPULATION:** To provide soldiers for conquest, sailors for commerce, and laborers for manufacturing and agriculture the government encouraged population growth. It reduced taxes on families with many children. Employers gave preference to men with large families. Manpower was the basis of an aggressive and war-like nation.

**c. PROMOTION OF COMMERCE:** A strong navy was just as important to the creation of a world power and the maintenance of its prestige as a standing army, and even more important for the protection of colonies. Each country regarded its merchant marine as a sort of secondary navy, indispensable for the transportation of troops and supplies, and even useful as fighting ships in case of emergency. For this reason each nation encouraged shipbuilding and attempted to keep all foreign vessels from carrying its products. The Navigation Acts of England were probably the most complete application of mercantilistic principles to commerce in Europe. They were undoubtedly a great aid in building up England's carrying trade, in competing with Continental countries, and in the development of England's colonial system.

**d. COLONIAL DEVELOPMENT:** Colonies were important to the mercantilistic state only in so far as they ministered to the interests of the mother country. They were usually established to supply raw materials for the industries of the homeland. But the colonial populations also constituted an excellent controlled market for the products of the domestic industries. England again furnishes an excellent example. The carefully nurtured merchant marine was employed to transport the raw materials from the North American colonies to the protected industries at home. On the return trip they carried the fabricated products from England to the colonies, where local manufacturing was discouraged and trade with other nations forbidden.

**e. PROTECTION OF MANUFACTURING:** To be powerful and relatively self-sufficient the national governments en-

couraged manufacturing and discouraged foreign imports. This was accomplished in various ways. Duties, similar to our modern tariffs, were levied upon products entering the country. These levies, of course, raised the prices at which imported goods had to be sold and thus enabled domestic concerns to compete successfully in the home market with low-cost foreign goods. In some instances the importation of certain goods was prohibited entirely. Exports were also encouraged in an effort to provide a foreign market for manufactured goods. This was done directly by providing a governmental bounty on goods produced for export and indirectly by "rebates" which refunded the tariff on such imported items as were worked up into manufactured goods and exported.

Although colonies were eagerly sought by the mercantilistic nations care was taken to keep the colonies from competing with home industries. The mother country expected her colonies to provide a supply of raw materials for her industries and a market for her industrial products. Neither of these aims could be realized if the colonies were permitted to operate manufacturing establishments of their own. The North American colonies under English control furnish typical examples of the various types of mercantilistic regulation. Since the iron industry was well established and capable of supplying the American demand, this industry was discouraged in the colonies. Cotton produced in the southern states was taken to England as raw material for her textile industry and returned to the colonies as manufactured cloth. Colonial textile mills were opposed. American tobacco, on the other hand, was given a monopoly in England and its growth there prohibited. The production of indigo in the colonies was encouraged by direct bounties. The production of naval stores, vitally important to the English navy and merchant marine, was also vigorously encouraged in the colonies.

f. REGULATION OF COMMERCE: The encouragement of manufactured exports and the discouragement of imports,

except raw materials, was consistent with the importance attached to the possession of large stocks of the precious metals. At this period of economic development foreign trade was almost entirely financed by the movement of precious metals. When the value of the manufactured products exported exceeded the value of the raw materials imported, specie flowed into the mother country. The changes in the technique of warfare, which have already been outlined, made the possession of a large treasure more important than ever before. Consequently, the influx of specie was regarded as a desirable condition in spite of the fact that the value of the products which a country lost was greater than the value of the products which she acquired. Such a "favorable balance of trade" became one of the objectives of every mercantilistic state. It was easy to create such a circumstance when trading with a gold-producing nation (as was the case with Spain and her American colonies) but in most cases one nation could only gain a favorable balance by creating an unfavorable balance for a competing state.

The system of regulation was not confined to international trade. In the internal affairs of the state a long series of regulations applied to almost every phase of business. The whole regulative structure can best be described by comparing it to the gild regulations of an earlier day, which it seemed to extend and apply on a grander scale. Wages were regulated. Manufacturing processes and the quality of products were rigidly scrutinized and prescribed. Even the birth rate was stimulated. The ideal of the mercantilists was a large sober population busily engaged in growing the crops and fabricating the products necessary to a wealthy and powerful nation. The French minister, Colbert, even opposed the profitable French wine industry because the consumption of liquor reduced the efficiency of the laboring population. At one time he abolished seventeen saints' days in order to provide more working hours for the production of wealth. The minuteness of the regulatory process can

be observed in the fact that Colbert's efforts resulted in a series of thirty-two codes of regulations and one hundred and fifty edicts applicable to manufacturing industry alone. In England, too, "in every quarter, and at every moment, the hand of government was felt."

3. **DECLINE:** It was to be expected that such a comprehensive policy of regulation and control would produce a reaction in which important groups would seek to achieve greater freedom of action. Groups of merchant capitalists pamphleteered against the onerous restrictions and some deserted legal trade entirely to enter the lawless practice of smuggling. The rising group of industrial capitalists were, likewise, restive under the strong hand of governmental control and sought spokesmen to champion their cause. These they found in the new school of laissez-faire economists who followed the lead set by Adam Smith in his *Wealth of Nations*, which challenged the fundamental tenets of a mercantilistic system.

"Mercantilism like most bodies of doctrine held by large groups, lasted too long, outlived its usefulness, became false doctrine." The fallacy of protecting manufacturing industries not well suited to a country in order to promote a "favorable balance of trade" was pointed out by the laissez-faire economists. They emphasized the fact that the greatest general welfare could only be achieved by permitting goods to be produced in the most advantageously located regions and freely exchanged. The quantity theory of money was developed and used to show that the increase of the stock of precious metals in a country was a powerful factor tending to raise prices and wages and thus increase costs. This reduced the country's competitive advantage in foreign trade. Then too the precious metals became less important as the techniques developed by means of which credit could be built upon a relatively small monetary base and employed in place of metal coins. Even wars were increasingly financed upon credit.

The concept of natural law, popularized by Newton in the physical sciences, was developed in the social sciences by the physiocrats, who represented a violent reaction to the mercantilistic principles of Colbert. Just as the physical world supposedly operated according to natural laws over which man had no control so the economic world was believed to operate according to laws which man could not violate with impunity.

In the midst of the ideological ferment and intellectual confusion accompanying the transition from the principles of mercantilism to the concepts of laissez faire there burst upon the unsuspecting people of England the first phases of those technological changes now known as the Industrial Revolution.

### STUDY QUESTIONS

1. What are the basic prerequisites for the development of mercantile capitalism? Evaluate each of the principal factors which aided the development of capitalism. Distinguish commercial and financial capitalism. Enumerate the significant features of capitalism.
2. Discuss the nature and significance of the enclosure movement. Why did it spread so rapidly in the sixteenth century? Differentiate the enclosure movement of the sixteenth century from that of the eighteenth century. Discuss the origins and chief features, of the eighteenth-century movement.
3. Why is the woolen industry of such importance in English economic development? How does each of the following reflect the development of capitalism: Merchants of the Staple, Merchant Adventurers, regulated companies?
4. Discuss the chief characteristics, merits, and defects of the domestic system. Explain how factors were able to gain control of the relation between the clothier and the merchants (market for cloth). How extensive was the domestic system?
5. What caused the increase of the periods of depression and unemployment in the sixteenth century? Are these phenomena necessary accompaniments of a capitalistic system?
6. Explain the origin and development of the functions now performed by commercial banks. Are these functions essential to all forms of capitalism?

7. Compare the ways in which the state hindered the development of capitalism with those in which it aided. Which predominated? From what sources other than the state did opposition to the new capitalistic classes and practices arise?
8. What were the origin, chief principles and practices, significance, and causes for the decline of Mercantilism? How was Mercantilism related to the Commercial Revolution?
9. Compare the social controls of commercial capitalism with those of commercial feudalism. What evidence can you offer of bourgeois influence in sixteenth-century statecraft?
10. In what sense was commercial capitalism a prerequisite for industrial capitalism? Why is the market called the heart of capitalism?

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## Part V · *Industrialism*

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## *Chapter Nine*

# The Industrial Revolution

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### I. HISTORICAL BACKGROUNDS

The term "Industrial Revolution" is applied to a period during which the economic and social pattern was greatly affected by important technical changes. The period was revolutionary only in the sense that its consequences were fundamental alterations in the types of organization and methods of operation in a wide variety of business and industrial fields. It was not revolutionary in the sense of a sudden and catastrophic overturn of an established order and the substitution for it of a new and different one. The most striking phases of the movement in England occupied the period from the middle of the eighteenth century to the middle of the nineteenth century but the roots of the movement go back to the period of early capitalism. The decades since 1850 have shown a continuation of substantially similar types of change in other areas of the world and in other fields of business activity. In short, the Industrial Revolution occupied the better part of a century in England, was the outgrowth of at least two centuries of development prior to the eighteenth century, and set forces in motion which are still at work in contemporary society. The Industrial Revolution, therefore, cannot be regarded as constituting a hiatus in social

or economic evolution. It is merely another and exceptionally colorful phase in the process of cultural change.

### A. AIDING FACTORS

Although every aspect of the cultural pattern during the sixteenth and seventeenth centuries constituted the general social milieu within which the forces of the Industrial Revolution were generated, not all features of that period were of equal importance.

1. **THE COMMERCIAL REVOLUTION**, already described in detail, contributed more significantly to the origin of the Industrial Revolution than any other single factor or movement. During the Commercial Revolution the final disintegration of the feudal system took place. A money economy was introduced, and markets were enormously widened. The bourgeoisie appeared in industry and government. Specialization and interdependence were becoming common. Population increased. A situation existed which was favorable to the introduction of techniques for the increase of production. Early capitalism supplied some of the simpler ones but it remained for the Industrial Revolution to introduce the power-driven machinery which forms the basis of modern industrialism.

2. **INTELLECTUAL REVOLUTION**: Such equipment and such technical processes could not appear until the intellectual aspects of society had been modified. The belief in authority, whether that of the Church or that of secular writers, was undermined by the increasing reliance upon experimentation as a source of knowledge and truth. The feudalistic attitude of "otherworldliness" was challenged and gradually replaced by the scientific attitude.

The Reformation weakened the power of the medieval Church and the Renaissance supplied a new literature on worldly subjects. Up until this time the writings of the ancient Greeks, particularly those of Aristotle, had been kept out of Europe largely because of the domination of learning by the medieval Christian Church. We have

already seen how these writings had been preserved and enriched by the Saracens during the so-called "dark ages" in Europe. The trickle of such literature into Europe which began with the Crusades swelled to a major stream about the middle of the fifteenth century with the flight of scholars from Constantinople. This literature and the secular ideology which accompanied it spread eastward and northward along the trade routes into the new nations of sixteenth-century Europe and ultimately across the channel into the bustle of Elizabethan England. The revival of interest in worldly literature, the increased attention to everyday affairs, and the altered ideology of the times are part of what is commonly called the Renaissance. The impact of these forces in Europe produced the secondary but powerful reaction called the Reformation, which not only turned the eyes of man from the salvation of his soul toward the acquisition of worldly goods and the support of kings but which also supplied the ethics of a culture built on a bourgeois pattern. The acquisition of wealth was given religious glorification in the writings of John Calvin (1509-1564), while frugality as a means of accumulating a capital fund found ethical support in the writings of John Knox (1513-1572).

But more important to the rise of industrial capitalism as a new cultural pattern was the evolution of a scientific point of view and the accumulation of the facts upon which the physical sciences are built. The scholars who developed an experimental methodology laid the foundations for the inventors of the eighteenth century. They prepared the way for the appearance of modern technology. The conflict between authorities caused men to turn away from the Church, from Aristotle, in fact away from authority in general. It caused philosophers as well as experimenters to seek a new method for the discovery and establishment of truth. After all else had failed men turned to their own powers of reasoning and to the careful observation and investigation of nature. The phenomena of nature took on



a new significance when studied from the standpoint of reason rather than authority. Men had begun to study the world itself instead of their predecessors' conceptions of it. *Rationalism* connotes a belief that all things are amenable to reason and that man's chief problem is the discovery of the laws governing the physical world. This new emphasis upon reason, upon observation of nature, upon experimentation, in short upon scientific method resulted in a complete intellectual revolution.

The medieval Church taught that the earth was the center of the universe and that the sun and the heavens were created for the special benefit of man. Early scientists began to doubt this explanation. On the basis of observation and study they became convinced that the sun, not man's little earth, was the center of the universe. Galileo (1564-1642) was perhaps the first to muster sufficient courage to support this view openly. When scientists claimed that the earth revolved about the sun they challenged the whole ecclesiastical point of view. They apparently reduced the importance of man, questioned the authority of the Church, and cast doubt upon the divine plan of creation. The Church rose at once to the defense of the orthodox point of view and a long controversy followed. In their efforts to prove that the sun was the center of the universe and that the earth was merely one of several planets revolving about it, the early investigators turned to astronomy and mathematics. As they worked they were lead down many byways of thought into new areas of knowledge where they laid the foundations of the physical sciences. Slowly but steadily they enlisted an ever-increasing parade of supporters while the Church retreated more and more into the spiritual and religious realms.

One of the significant contributions to power technology was unwittingly made by Torricelli in 1643, when he invented the barometer to prove that the earth's atmosphere exerted pressure. Torricelli filled a tube with mercury

and inverted it in a cup of the same liquid. The mercury stood in the tube to a height of about twenty-nine inches, leaving a space in the tube above it. This space he called a vacuum. Immediately a great controversy arose as to whether there was a vacuum in the tube and as to whether the mercury was really supported by atmospheric pressure. The scientists finally were able to prove their claim that the air had weight and that its pressure could be utilized by creating a vacuum. This became one of the basic principles of early power technology. As we shall see, all the early engines employed a partial vacuum and received their energy from the pressure exerted by the surrounding atmosphere. While this and other purely philosophical controversies raged and filled volumes, the little groups of scientific investigators kept observing and experimenting. Their labors slowly but steadily built a fund of knowledge which made cloistered controversies not only useless but irrelevant.

The work of Copernicus, Kepler, and Galileo contributed a number of important foundation stones to the structure of modern science. Copernicus and Kepler evolved the theory that the earth revolves about the sun, that it rotates upon its axis, and that the heavenly bodies are subject to the laws of nature. In 1610 Galileo, with the aid of a telescope, made observations which confirmed the Copernican theory experimentally and aroused unusual interest and tremendous opposition.

The scientific foundations of modern technology were further augmented by the work of René Descartes (1596-1650), the originator of the mechanical interpretation of nature. He retained the concept of the simplicity of nature and added to it the idea of regularity. The world was conceived to operate in accord with understandable mechanical laws which were regular in their operation. The physical world thus became subject to control by man.

Sir Isaac Newton (1642-1727) supplied the key-stone in the arch of a mechanistic interpretation of nature which

his predecessors had erected, by inventing the calculus. This provided an exact mathematical method of describing many natural phenomena. With it practically every change in physical relationships could be expressed mathematically as a curve. Newton believed that he had found a method having universal applicability. The scientists of that day were encouraged to believe that the natural laws of the whole universe could be investigated by man's observations and experiments upon this planet.

The controversy between the ideology of a decaying and that of an emerging culture did not cease as scientists slowly compiled facts and philosophers interpreted the behavior of the physical world. Instead, the conflict of authoritarianism and experimentalism continued and absorbed a vast amount of human energy in scholarly attempts to prove logically the validity of long-established ideas. But the revolution in thinking was in progress. Many practical-minded men, especially among the bourgeoisie, sought to apply the new findings of scientists to the problems of a profit-motivated economy. The expanding markets taxed the productive powers of a handicraft industry and offered rich rewards to those who could overcome the limitations imposed by human skill and fatigue. The new scientific experimenters had discovered the forces of nature and the behavior of matter. A group of secondary experimenters tried to apply these new laws of physical science to the problems of production. From their efforts came the keystones of industrialism—the machine and the engine. The machine solved the problem of skill; the engine (motor) that of muscular fatigue.

## B. TECHNICAL ORIGINS

1. THEORETICAL PERIOD: Although the Industrial Revolution involved new techniques and new mechanical equipment in many fields of production, such as coal mining, iron and steel, pottery, textiles, transportation, and artificial

power, it is not necessary to treat each one separately. The evolution of the steam engine as a means of producing artificial power upon a commercial scale is the most important technical development of the period as well as typical of the type of progress shown in the other fields.

a. SKETCH BOOKS: During the sixteenth century the works of ancient engineers were translated and published. These new ideas, available for the first time in Europe, stimulated a number of individuals to think about applying the ideas and principles of the ancients to mechanisms useful in sixteenth-century society. They published their results in a number of books showing diagrams of a wide variety of most amazing devices and machines. Actual models of the machines thus sketched were never built and for this reason the sketches were of no commercial value. Their chief significance was that they acted as a starting point for further work.

b. PROJECTORS: The projectors of the seventeenth century differed from the sketchbook writers of the preceding century in that they attempted to construct models of the engines which they sketched. Most of their models would not work, but the few that did demonstrated the worthwhileness of experimentation. Those that refused to work showed the errors and pitfalls to be avoided in future endeavors. Practically none of the engines and devices were commercial successes. For this reason it was fortunate that the projectors came from classes which could afford to dabble in non-remunerative research. They were chiefly merchants and professional men who were liberal-minded and progressive as a result of travel, experience, and training. Although landed aristocrats had the money necessary for scientific experimentation they found such endeavors foreign to their tastes and made practically no contribution to the increasing body of scientific knowledge.

In general, the work of the projectors was characterized by rather extensive ignorance of the mechanical and chemical principles involved in their work, by great versa-

tility of purpose and design, by enormous imaginative fertility, and by unbounded optimism.

c. SCIENTIFIC SOCIETIES: It was largely as a result of the writings of the sixteenth century and the experimentation of the seventeenth century that scientific societies for the furtherance of scientific research were created. The first scientific society appeared in England in 1645, when the Royal Academy of Science was founded. Three years later the Oxford Philosophic Society made its appearance and, in spite of a title which in modern times would remove it from the physical sciences, devoted its energies in large part to the encouragement of scientific study and the dissemination of the results of research. In 1652 these two societies merged and for eight years carried on their activities jointly. In 1660 the *Royal Society of London* broke from the merger and began a separate existence which has continued until the present day. It has the enviable distinction of having exercised a more profound influence upon modern scientific development than any other single body.

The credit for its origin goes primarily to three men: Christopher Wren, the architect of St. Paul's Cathedral in London; Robert Boyle, the eminent chemist; and Thomas Wilkins, the noted mathematician. Although its stated purpose, when organized, was the promotion of physico-mathematical knowledge, its interests gradually grew to cover every subject amenable to scientific method.

It is scarcely possible to overestimate the significance of the Royal Society. It greatly aided the work of professional men and added to their prestige at a time when the older and more "respectable" elements of society tended to scoff at their labors. In time membership in its ranks became the prime evidence of achievement and honor in scientific pursuits and was eagerly sought. It became the model and pattern for the establishment of twenty-eight royal societies all over the world. Its most important contribution was the aid which it consistently gave to the diffusion of scientific knowledge throughout the entire

civilized world by its publications and through its affiliations with similar societies in other countries.

2. **EXPERIMENTAL ENGINES:** Although the seventeenth century was a period in which many engines for the production of artificial power were invented and tried out, the first experimental use of steam occurred in classical antiquity. But it was not until the eighteenth century that any such device proved itself a commercial success.

a. **CLASSICAL ENGINES:** About 130 B.C. Hero of Alexandria wrote a treatise in which he described a number of mechanical principles and devices. He also produced experimental models and some of these were put to actual use in trivial ways rather than as an aid to economic efficiency in important productive activities. One of his best known devices was the *Aeolipile*, a very simple type of what would now be called a steam reaction turbine. It consisted simply of a spherical vessel pivoted on its central axis and provided with a steam inlet through one of its pivots. The steam was permitted to escape through bent pipes placed on opposite sides of the sphere's equator. As the steam escaped under pressure from these pipes into the atmosphere it caused the sphere to rotate in a direction opposite to that taken by the escaping steam.

Another of Hero's devices made temple doors open mysteriously after a devotee had placed a sacrificial fire upon a hollow altar near the temple doors. The successful operation of the device depended upon the fire to heat the hollow altar, thus causing the air inside it to expand and to force water into a pail from a closed container under the altar. The increased weight of the pail caused it to pull the doors open by means of ropes attached to levers on the elongated doorposts.

These two are typical of the other devices invented by Hero. All were used for some such purpose as turning spits, opening temple doors, blowing an organ, or producing a water fountain. All his practical devices were made for the upper, exploiting class of the Greek Temple Town civiliza-

tion. These were the only persons who had the power to command the services of inventors for the solution of their problems or the satisfaction of their fancies. No substantial progress in power technology was made between the time of classical Greece and the beginning of the Commercial Revolution. During the Roman period the abundance of slave labor and the war-centered ideology of the control classes discouraged thinking along industrial lines. Again during feudalism chivalry, agricultural serfdom, guild control of manufacturing, and "otherworldliness" all combined to discourage endeavor along mechanical lines. Not until the bourgeoisie had risen to a position of power in Italian city-states and the works of the Greeks had been reintroduced into Europe with the Renaissance did an atmosphere conducive to technical endeavor exist. The writings of the Greeks awakened the interest of scholars in mundane subjects and directed their energies to the investigation of natural phenomena, upon which modern science and technology are based. The wealthy merchants and rising princes were the patrons of the writers and experimenters of the Renaissance. As the Commercial Revolution enlarged the market and created a demand for goods beyond the power of the guilds or the domestic system to supply, the problem of machine production and power technology offered a lucrative field for the efforts of inventors. The technical aspects of the Industrial Revolution flowed in unbroken sequence from the descriptions of Hero's engines through the sketchbook writers and the projectors to the practical engines of Newcomen and Watt.

**b. PROJECTOR'S ENGINES:** The engines built by the projectors were of two general types: steam-vacuum engines, and explosion-vacuum engines. Both of these were really atmospheric engines; that is, the actual driving force came from the atmospheric pressure which forced water or a piston into the partial vacuum created by condensing steam or exploding gunpowder.

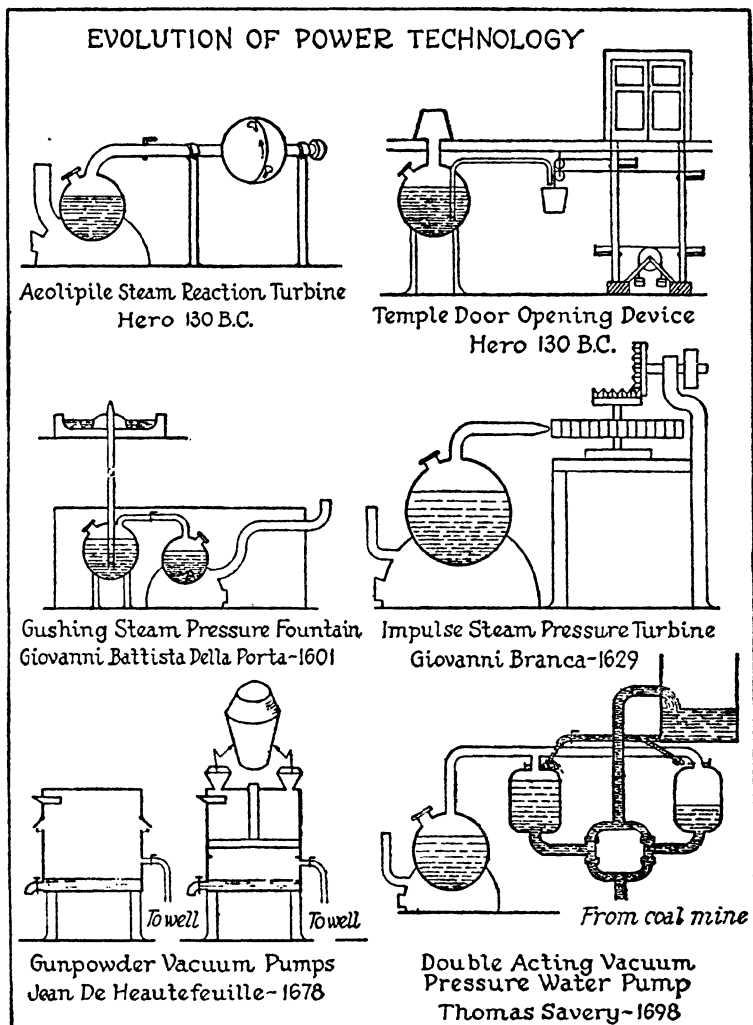


FIG. 9.—EARLY POWER DEVICES

The ideas of the Greeks guided the earliest experimenters in harnessing natural power, but more progress was made during the seventeenth century than during all preceding time. The ideas of the Greeks and of early scientists established the principle, but the problems of the early bourgeoisie determined the form of the first practical engines.



Both Giovanni Battista della Porta (1601) and Solomon de Causa (1615) produced devices for the creation of water-fountain effects. These were produced by introducing steam under pressure into a closed vessel filled with water, thus forcing the water out through a jet into the air. Giovanni Branca in 1629 designed an engine shaped like a water wheel but driven by the impact of a jet of steam on its vanes. This device embodied the principle of the steam turbine. One of the first water-raising engines was designed by Della Porta. It relied upon the condensation of steam to produce a vacuum and thus permit atmospheric pressure to force water from a well to a higher level. None of these engines were of any practical importance but all contributed toward the increase of knowledge concerning mechanical principles.

About 1678 Jean de Heautefeuille began to explore the possibilities of another type of engine. His engines used the explosive force of a charge of gunpowder to expel all the air and gases from a chamber. Valves were arranged to close automatically and to hold the vacuum thus created. In the engines of Della Porta and De Heautefeuille the basic principle was the same. Whether the vacuum in the chamber was created by condensation of steam or by the explosion of gunpowder was of little consequence. The one which worked best and could be controlled most easily was the one to be used. This turned out to be steam and the subsequent development of water-raising engines of the atmospheric type was bound up with the use of steam.

It might seem curious that the power of steam under pressure or the explosive force of gunpowder was not used directly. This was due partly to the lack of knowledge concerning the use of the piston and cylinder and partly to the temporarily insurmountable difficulties which inventors encountered in making engines with parts of sufficient accuracy. There was, for example, no means of boring cylinders with precision and equipping them with tight-fitting pistons. Jean de Heautefeuille's chief contribu-

tion to the development of "heat" engines lies in the fact that he was the first to use the piston-and-cylinder construction in one of his later gunpowder engines. The piston in De Heautefeuille's second engine with its more efficient leather valves had nothing to do with the transmission of power. Its sole purpose was to separate the exploding gunpowder with its unpalatable residue from the water which was pumped from a well for drinking and general household use. The piston neither transmitted power nor increased the efficiency of pumping but it did suggest the use of such a device. The piston rod merely helped guide the piston up and down the cylinder and kept it from binding. Later Newcomen used an almost identical piston and rod to transmit the power generated by condensing steam to the pump used to clear mines of water. This type of construction became common in the eighteenth century, when technical means of boring cylinders was available on a commercial scale.

3. PRACTICAL ENGINES: It is customary to think of James Watt as "the inventor of the steam engine." Unfortunately much of this claim is false and the part that is true must be accepted with many emasculating reservations. The first commercially practical engine was the Newcomen engine, many features of which Watt copied. Watt's first engine was an atmospheric type like its fore-runners. The three principal parts of a steam engine are the boiler, the cylinder, and the piston. None of these were invented by Watt. In fact no single individual invented the steam engine. Like most important inventions it was the product of the combined efforts of many persons. Watt modified the Newcomen engine. Newcomen built upon the work of Papin, Savery, and Della Porta. They, in turn, could not have made their contributions had it not been for the labors of the projectors, the sketchbook writers, and the theoreticians who were studying the behavior of gases and the properties of a vacuum. Let us examine the contributions of the four principal inventors.

a. THOMAS SAVERY: In 1698 the British government issued a patent to Thomas Savery on his double-acting engine. It employed two cylinders, neither being fitted with a piston, and used both atmospheric and steam pressure. The valves in the pipes leading from the well to the engine and from the engine on up to a higher level were one-way valves permitting the water to rise but preventing its downward escape. Steam, generated in a boiler, was introduced into one cylinder and condensed by permitting cold water to flow over the outside of the cylinder. The vacuum thus created sucked water up into the cylinder. Steam was then introduced into the cylinder under pressures as high as eight atmospheres, forcing the water out and up to a higher level. While one cylinder was being emptied the other was being filled, thus assuring a continuous flow of water from the device.

Numerous difficulties accompanied the attempt to put these engines into use. The high pressures and great heat melted ordinary solder and caused Savery to use spelter for the joints and seams, although it involved great inconvenience and considerable expense. Since no safety valve was used and it was impossible to determine the exact pressure in the boilers at any given time it is not surprising that his boilers occasionally exploded. Some half dozen or more of these engines were actually set up for pumping water from flooded coal mines and each of them exploded at least twice, sometimes killing attendants or bystanders. These accidents gave all steam engines a bad reputation for a time. The engine could complete about six cycles per minute but it did not develop more than three horsepower. Its greatest weakness was the inefficiency due to the external cooling of the cylinders and the consequent great condensation of the steam introduced under pressure to force the water to a higher level. Of course, when the hot steam came into contact with the cold water large quantities of it condensed before the pressure forced the water from the cylinder. This waste of steam resulted

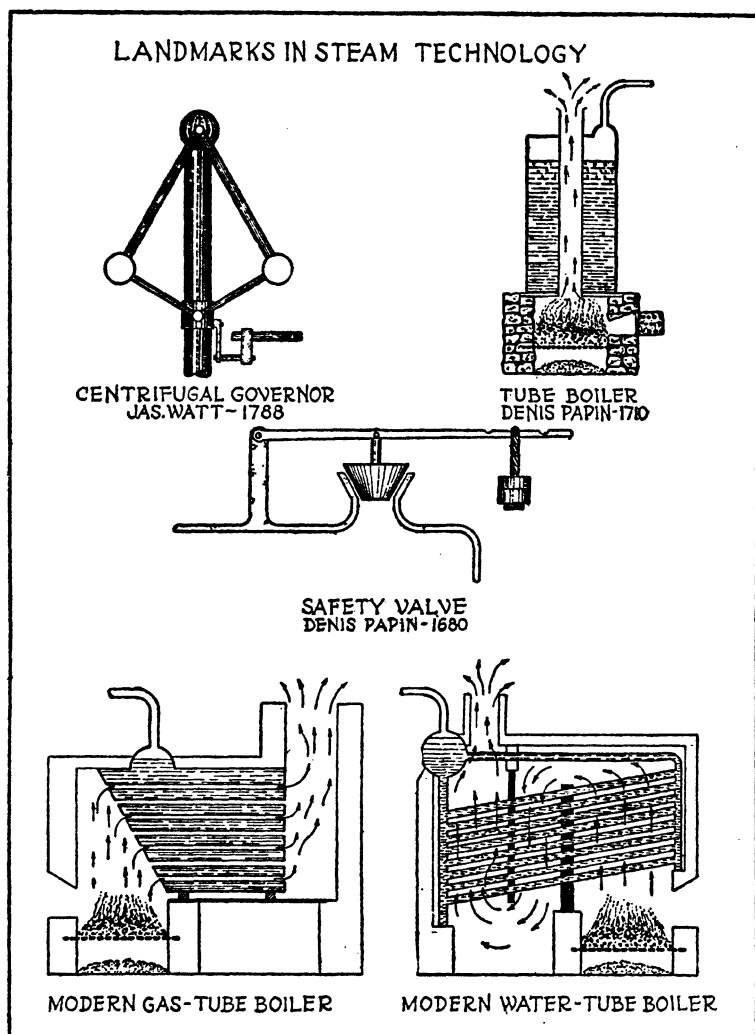
in a very great consumption of coal in order to maintain steam pressure in the boilers. The engine apparently used nearly twenty times as much coal for the work accomplished as modern engines.

b. DENIS PAPIN: The engine upon which Papin worked for years was never a success because of his effort to use the same chamber as both boiler and cylinder. After becoming familiar with the Savery engine in 1705, he abandoned this idea and adopted a number of its features, finally producing a single-acting, non-condensing steam pump. This device never became a commercial success, and Papin's claim to fame rests upon other considerations.

In 1680 he invented a *safety valve* in which the amount of pressure in the boiler of an engine could be regulated by sliding a variable weight along a bar which pressed against the valve. The greater the weight, or the further out on the bar, the greater was the pressure required to open the valve. Although Savery refused to use a safety valve, all subsequent engines have been equipped with Papin's valve or some improved type.

In 1690 Papin suggested the use of a *piston* in a cylinder to separate the steam from the water and thus prevent excessive condensation of the steam and also to improve the efficiency of the vacuum and pressure principle as used in the Savery engine. Although a piston had been previously used in the gunpowder engine, Papin was the first to adapt it to the steam-condensing type. His work became the basis of the piston-cylinder engine developed by Newcomen.

In 1710 Denis Papin made another significant contribution to steam-power technology by inventing the *tube boiler*. By placing the flue or chimney within the boiler so that it was surrounded by water, he was able to utilize more of the heat in the firebox to generate steam. Although Papin never developed this feature beyond a single flue through a boiler, such construction is now universally used in power boilers. Modern railroad steam engines employ multitube boilers to generate the high pressures required



**FIG. 10.—GENERATION AND CONTROL OF STEAM POWER**

The modern steam engine was largely a product of Denis Papin. His tube boiler made possible the rapid generation of high steam pressures while his safety valve kept such pressures within the capacity of the boilers. Today the tube boiler is universally used to generate steam power. Watt's governor automatically controlled the new motive force and made possible the steam-powered factory. Industrial capitalism is the cultural consequence of the social changes which steam technology produced.

to move long trains. Flames pass through numerous tubes en route from the firebox to the smokestack. Such a boiler is known as a gas-tube type, since the flames pass through the water-surrounded pipes in the boiler. Water-tube types are a variation of Papin's original idea and are used in stationery boilers for heating and power purposes. Here the tubes or pipes run obliquely upward from one tank to another and hold the water. Flames pass over, around, and between the numerous parallel pipes and convert the water into steam.

c. THOMAS NEWCOMEN: With the assistance of others, Thomas Newcomen produced the first practical piston-and-cylinder-type atmospheric engine in 1705. About six years later his engines began to come into practical commercial use for the pumping of mines. Although the engine could be adapted to a number of functions its actual use was confined almost exclusively to pumping water from collieries or to provide a water supply for cities. For nearly a century it constituted the chief power device in England and was even introduced into the English colonies. An examination of its design and principles of operation will make clear the advantages it possessed over earlier models.

The most obvious feature of the engine to the casual observer was a great rocking beam. One end was attached by a chain to the piston of a water suction pump while the other end was similarly attached to the piston of the atmospheric engine. A boiler was attached to the cylinder in which the piston was free to move up and down. On top of the piston was a layer of water to assist in sealing the space between the piston's edge and the cylinder walls. It was the accidental leakage of some of this water past the piston into the steam-filled cylinder which gave Newcomen the idea of condensing the steam in the cylinder with an internal jet of cold water instead of an external bath as in previous engines. No steam pressure was required to push the piston up since this was done by a heavy counterweight on the opposite side of the overhead rocking beam as soon

as the valve was opened admitting steam from the boiler. As soon as the cylinder was full of steam the valve was closed and the steam condensed by the jet of water from another valve. The vacuum thus produced permitted the pressure of the atmosphere on the top of the piston to force it down with great power. Since the pressure of the atmosphere is approximately fifteen pounds per square inch, a piston having an area of one hundred square inches would be subjected to a pressure of nearly fifteen hundred pounds. This power, of course, raised the opposite end of the rocking beam and the piston attached to it, sucking water up from a well or flooded coal mine.

One of the defects of the Savery engine had been the high steam pressure used. The Newcomen engine overcame this defect entirely for the power exerted by the piston in its downward stroke was totally independent of the pressure of steam in the boiler. Indeed, the engine could be operated with the cover entirely removed from the vent through which the boiler was filled with water. It seems probable that most of the Newcomen engines were operated on steam pressures little greater than that of the atmosphere outside the boiler. The fact that the pressure on the pump was independent of the pressure in the boiler was its chief advantage. The Newcomen engines seldom blew up, and when they did it was because of a defect in the boiler, the sticking of the safety valve, or improper operation. In spite of the fact that they were slow and relatively expensive to operate they were capable of doing the work of about fifty men.

The principal defect of the Newcomen engine was its inefficiency. The fuel consumption was hardly less in relation to the work accomplished than in the Savery engine. This wasteful consumption of fuel was largely caused by the necessity of alternately heating and cooling the cylinder for each stroke made by the piston.

d. **JAMES WATT:** While repairing a model of the Newcomen engine for the University of Glasgow James Watt

was struck with the wastefulness of the alternate heating and cooling of the cylinder and attempted to discover some means of eliminating that defect. He presently evolved the idea of using a separate chamber for the condensation of the steam. This *condenser* could be kept cool at all times and that would permit the cylinder to be kept hot. In order to accomplish this purpose he enclosed the separate condenser in a jacket through which cold water was kept circulating. Furthermore, the *cylinder was enclosed*, first by a wooden cover and later by a steam jacket. A small pump was used to draw the steam from the cylinder into the condenser.

Watt's patent specifications in 1769 claimed several other features which were never actually used. These included the use of the expansive force of steam instead of atmospheric pressure above the piston. This might easily have developed into a non-condensing high-pressure engine but Watt did not follow up his original suggestion, possibly because such an engine had already been described by Leupold in his "Theatrum Machinarium" in 1725. Watt seems to have had a strong aversion to using anything superior to his own ideas. His patent specifications also contained suggestions for the design of a rotary engine. Both the high pressure non-condensing and the rotary engines were developed later by other inventors.

Watt experienced many difficulties in financing his experiments and in placing his engine on the market, but his experimentation did not cease with the successful development of his first engine. Some of his improvements and later inventions are of particular importance. So long as the engine was attached to the great rocking beam characteristic of the earlier engines it could deliver only reciprocal (back-and-forth) motion. This was sufficiently satisfactory when the engine was used to operate a water pump but did not lend itself to industrial uses. Power of a rotary sort, taken from a water wheel, had long been harnessed for industrial purposes but there was an increasing demand



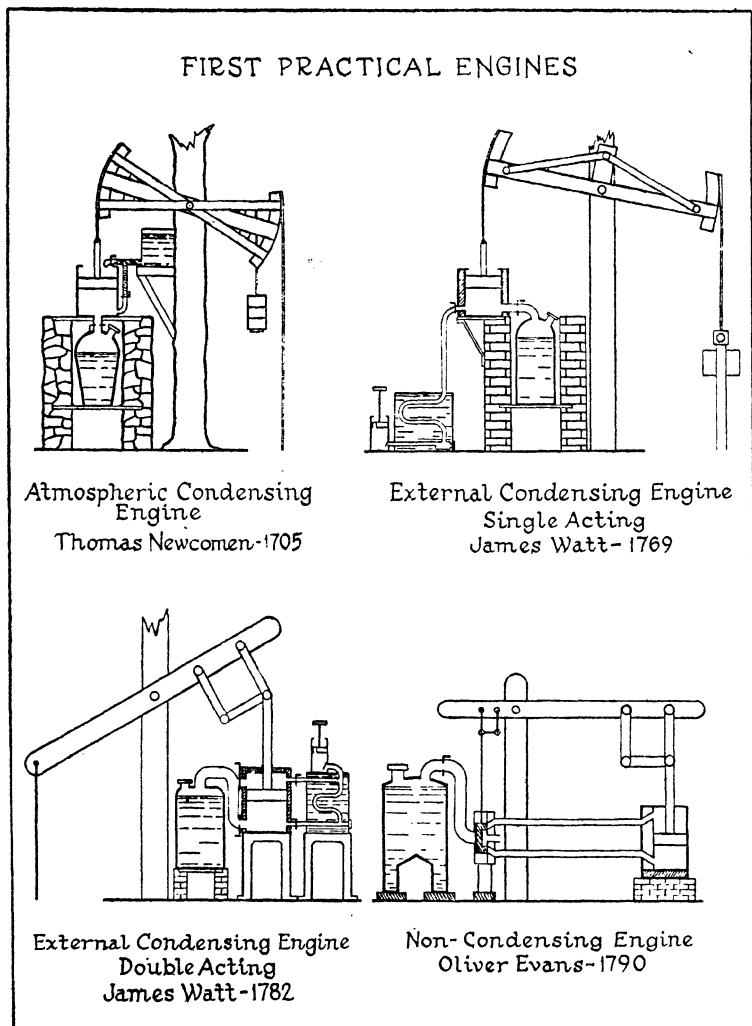


FIG. 11.—FROM ATMOSPHERIC TO STEAM POWER

All early engines obtained their power from the pressure of the atmosphere. By creating a partial vacuum below a piston the weight of the earth's atmosphere was made to do useful work. Even James Watt worked for many years to improve engines using atmospheric pressure. The modern, steam pressure engine was not born until late in Watt's life.

about the middle of the eighteenth century for sources of power in localities without streams. In order to meet this need Watt invented the crankshaft and connecting-rod device for securing rotary motion from the reciprocal motion of the piston in his engine. However, he found that the device had already been patented by Pickard. To Watt, paying a royalty was admitting the superiority of another's invention. This Watt refused to do. He devoted his attention to inventing a substitute device which would serve as well and in 1781 produced the "sun and planet gears." This cumbersome and relatively inefficient device accomplished Watt's purpose and was employed on his engines until the expiration of the patents released the crankshaft for general usage.

Another device was essential before the steam engine could be used as a source of power for industry: a throttle-valve governor to control easily and accurately the speed of the engine. The *centrifugal-type governor* which Watt invented permitted his engine to be operated at a uniform speed selected at will by the operator.

In 1782 the engine itself was improved by introducing steam on both sides of the piston, thus making it a *double-acting engine*. However, the separate condenser was retained. Since both ends of the cylinder had to be closed the atmospheric pressure which had formerly forced the piston into the vacuum was replaced by low steam pressure of one or two atmospheres. With this improvement the Watt engine ceased to be a true atmospheric engine but still did not become a true pressure steam engine. Had Watt discarded the separate condenser and increased his steam pressure, relying upon it to push the piston without the aid of a vacuum, he would have had a pressure steam engine. But Watt always opposed high-pressure steam and remained firmly of the opinion that low-pressure engines were superior.

With a double-acting engine the piston was capable of producing power in both directions, instead of in only one

direction as had been the case with his earlier engine. With a double-acting engine a chain to connect the piston to the beam was out of the question. It is quite possible to pull a beam down with a chain but impossible to push it up with the same chain. To solve this problem Watt invented what he called his "parallel motion device." This was a series of rods which kept the thrust of the piston against the rocking beam parallel with the axis of the cylinder, enabling the thrust as well as the pull of the piston to be utilized. Although this device, like his steam trip-hammer, illustrated the fertility of Watt's imagination and the versatility of his genius it was of less importance than those mentioned above since it was soon rendered obsolete by a creation of William Bull.

Watt and his practical partner, Boulton, marketed many of their engines by entering a contract with the user whereby he agreed to pay the partners a percentage of his savings on fuel compared with the Newcomen engine. This led to many disagreements, some court cases, and a great deal of trouble. Watt classified his engines on the basis of the amount of horsepower they would produce. In order to avoid disagreement and dissatisfaction on this point he defined a horsepower as the ability to raise 33,000 pounds one foot in one minute. Since this is in excess of the actual ability of the average horse he avoided the criticism that his engines would not deliver their rated horsepower.

Watt's activity in the development of power technology offers an excellent example of the conditioning of the individual by the cultural pattern. The oft-repeated story of Watt's early interest in the ability of steam to jingle the lid of a teakettle is not only without historical foundation but opposed to the facts. Watt unquestionably possessed that important "tinker attitude" which distinguishes a creative mind from a mere mechanically trained one. But his thinking pattern had been cast in the mold of the prevailing technology. His first contributions to power technology, the external condenser and jacketed cylinder,

indicated his acceptance of the vacuum principle. The use of steam pressure did not occur to him until he had made many improvements in the atmospheric engine. Furthermore, all the elements of a steam-pressure, piston-type engine as well as of the even more efficient steam turbine had been evolved before James Watt turned his attention to engines. Even when he did state the principle of steam pressure he failed to utilize it practically in his engines. The economic advantages of a patent and the economic setting of problems surrounding power production and utilization directed Watt's efforts toward improving engines obviously handicapped by the limited amount of atmospheric pressure (fifteen pounds per square inch as compared to sixty or more pounds per square inch in the steam pressure engines).

After bringing the atmospheric-type engine nearly to the limits of its possibilities in his double-acting models, Watt turned his attention to harnessing these power units to the machines of the day. The problem of clearing coal mines of water had directed the efforts of Watt's immediate predecessors, particularly Savery and Newcomen. Now the textile industry demanded controlled rotary motion for its spindles and looms. Watt responded with his centrifugal governor to maintain constant speed and his "sun and planet" gears to convert reciprocating into rotary motion (and to get around the superior but patented crankshaft). The production problems of the late seventeenth century set the stage on which Watt, like all inventors from the tool makers of Paleolithic times to a modern engineer, performed his little act of adapting available means to socially conditioned ends.

4. LATER ENGINES: The first important advance upon Watt's work was the joint product of William Bull and Richard Trevithick. The "Bull engine," as it was called, was a low-pressure condensing engine, using the injection of a jet of cold water in the exhaust pipe to produce condensation. This enabled Watt successfully to defend his claim of infringement against Bull and Trevithick. The significant

feature of the engine, however, was the elimination of the cumbersome rocking beam which had characterized both the Newcomen and the Watt engines. This was accomplished with astounding ease. Bull simply inverted the cylinder and attached it directly to the pump rod, thus causing them both to move as one on the same shaft.

A true *steam-pressure engine* did not appear until the cylinder had been completely enclosed, the condensation principle entirely eliminated, and steam pressure applied alternately to opposite sides of the piston. This was accomplished in England by Richard Trevithick, who built the first steam tramway in 1804, using the exhaust steam to increase the draft in the flue of the boiler. This idea as subsequently applied by Stevenson brought the steam locomotive a long way toward its present perfection. In America Oliver Evans produced the first practical high-pressure steam engine and exerted such great influence upon technical practice that the use of high-pressure steam engines was widespread in America long before England had outgrown the influence of Watt.

The next important advance in design was the introduction of a *compound steam engine*, after many difficulties. As early as 1781 Jonathan Hornblower had built a two-cylinder engine in which the same steam passed from the smaller to the larger cylinder at reduced pressure. This principle made it possible to use the steam twice, the second piston utilizing much of the energy which had not been expended upon the first. Since the steam expanded when it passed from the higher pressure of the first cylinder to the lower pressure of the second this constituted the use of steam expansively, which Watt had mentioned in his patent specifications but had never used. Unfortunately Watt and Boulton were able to crush Hornblower for infringement of their patent. In 1804 Arthur Woolf revived the compound engine after the expiration of Watt's patent, but his success was short-lived for the more efficient single-cylinder steam engine soon displaced his engine in the principal market, the Corn-

wall mines. However, in 1845 McNaught again revived compound engines and they subsequently came into extensive use in marine practice, where economy of fuel was of prime importance, and on the railroads, where great efficiency was required. They were ultimately surpassed in efficiency by the *steam turbine* but a consideration of the varieties of modern engines would carry us far beyond the proper limits of the Industrial Revolution.

### C. ENGLISH LEADERSHIP

It was not by accident that England took the lead in making the changes which constituted an Industrial Revolution. Physical conditions played a large part. In certain English localities coal and iron deposits are found in close proximity, a great aid to the iron and steel industry upon which depended the success of engines and machinery made from metal. In addition, the fact that England was an island helped to isolate her from the political jealousies and military conflicts of the Continent and enabled her more consistently to devote her attention to the accumulation and use of a capital fund during the period of commercial capitalism. Her internal policies, too, were highly favorable. Her stable representative government exhibited a high degree of religious tolerance and provided for free trade within the country. Although England began the development of a colonial empire rather late, she was unusually successful and her extensive colonies provided an expanding market for her manufactured goods. In short, England provided the basic stability and tolerance in which individuals are encouraged to produce successive innovations and at the same time possessed the means for the utilization of the new equipment and techniques.

## II. THE PROCESS

The Industrial Revolution involved two primary changes and a number of secondary ones which were relatively contemporaneous. These various changes constituted the proc-

ess by which commercial capitalism was transformed into industrial capitalism.

## A. PRIMARY CHANGES

1. IMPROVED PRODUCTION TECHNIQUES: There can be no question concerning the vast improvements made in the methods of production during the late seventeenth and early eighteenth centuries. The two basic features upon which these gains rested were the machine technique and the application of power to the newly developed machines.

Not until a relatively high degree of specialization of the tasks within the confines of a single occupation had been reached could the machine technique be applied to any considerable part of industry. Professor Taussig well says: "The gradual elaboration of the division of labor slowly enlarged the number of occupations, diminished the range of each one, and tended to reduce each more and more to an identical routine. . . . whenever the same thing is to be done over and over, the blind forces of nature, working through a machine, can do it . . . better than most human hands." The essence of machine performance is that an *identical routine is endlessly repeated*. The consequence of intensive specialization within an occupation is to narrow the range of requirements and to approximate the kind of repetitive tasks which a machine is superlatively equipped to perform. The shoemaker, for example, performs a wide range of tasks in order to fabricate a complete pair of shoes. As this occupation is broken down into a multitude of minute tasks a point is finally reached where a task consists simply of nailing a heel in place, or of inserting the eyelets in the left side of a right oxford. Such a task can be reduced to a specific number of exact motions, each of which occupies a definite place in an orderly sequence. When that has been done a machine can be devised to perform the sequence and it is frequently found that by using a machine both the accuracy and the speed of the

operation can be increased. A laborer is still required, of course, to operate the machine. However, an unskilled laborer can now be used because the precision of the machine replaces the skill of the operator.

Once machine technology had been evolved and put in operation the application of power became possible. The transition is well illustrated by the process of weaving. In early times small grass mats were woven on rectangular frames by the laborious process of passing certain strands first under and then over the cross strands. This was transformed into a machine process by the invention of the hand loom, with its device for raising and lowering the alternate warp threads and its shuttle for passing the woof between them entirely across the loom. This was still done by hand power but the action became increasingly repetitive. The invention of the flying shuttle transformed the weaving process from hand labor to a machine industry. When the invention of the water frame permitted the application of natural power the task of the laborer was simply changed to one of directing and controlling the power-driven machine. Professor Taussig summarizes this development by saying that "When the steady repetition of the same movement becomes an important part of an industrial art, it is possible to apply other forces than man's muscles."

It was not easy to transform industry from the handicraft or domestic system to a power-driven machine stage. The general forces of conservatism and the special power of groups with vested interests opposed the trend toward mechanization. The general technical ignorance of the laboring population and of the business leaders made it difficult to demonstrate convincingly the superiority of the new methods.

To offset these difficulties there was the gradual but steady growth of new and pressing technical needs in specific industries. In the coal industry, for example, the surface deposits in England were nearing exhaustion by



the early eighteenth century. As the shafts were driven deeper in an effort to get the coal at lower levels, the water tended to seep into those portions of the mines which were below the level of the water tables. The job of keeping a deep shaft mine dry was too gigantic to be attempted with a hand pump of the cistern type. This situation produced an insistent demand for a power pump. The towns of England were also faced with a serious problem. Their populations were growing at a rapid rate both from natural increase and because of migrations from the country. The ability to supply these congested urban populations with an adequate water supply was seriously restricted by the lack of suitable water-pumping devices. These two demands largely accounted for the fact that practically all the early attempts to produce a steam engine were directed toward a device which would raise water.

The steam engine, first used to operate a water pump, was soon adapted to use in industry as a source of power for the mechanized processes. The significance of these two basic aspects of technical progress lies in the fact that they made modern mass-production methods feasible. The machine technique represented a gain in the precision of output but was still limited by vital fatigue. The application of artificial power to productive machinery removed this limitation and laid the foundation for the large-scale, multi-unit production typical of the modern industrial world.

2. INDUSTRIAL REORGANIZATION: It was inevitable that such vital changes in production methods as the introduction of machine technology and the application of power would produce fundamental changes in the types of industrial organization.

a. BASIC SHIFTS: Those alterations which were basic may be classified under three headings. In the *first* place the emphasis was shifted from man as the primary productive agent in society to machines. Man lost his significance as the central factor in the productive process and became merely a supplement to the power-driven machine. Henceforth,

labor became a commodity which, along with other commodities, was used in the manner and proportions dictated by the technology of the new process and the profit motive of the new entrepreneurs.

*Second*, there was a diminution of the importance of personal skill. One of the basic aspects of the evolution of machine technology was the incorporation of skill in the mechanism itself. Before the advent of machine technology the effective use of a tool had depended upon the skill of the operator; after it, the precise operation of the working part (tool) of a machine depended upon the mechanical arrangement of the mechanism and the accurate fitting and proper relationship of all its parts. The former skilled craftsman was replaced by the unskilled machine tender. A simple example will serve to illustrate the nature of this shift.

If a workman wishes to bore four holes in a flat metal plate, in such a way that they exactly correspond with four holes in a vessel to which he wishes to bolt the plate as a cover, he will first have to measure the exact position of the holes with great care and absolute accuracy. Next he will need to use a hammer and center punch to locate accurately the exact spot for starting his hand-operated metal drill. Great care must be taken to bore each of the four holes in exactly the right spot so that they will have the proper relation to each other and to the edges of the plate. The workman must also be sure that he holds his drill exactly perpendicular to the plane of the plate or the holes will not be straight. Only if all these operations are performed with the perfection which comes only with long practice will the finished plate fit the vessel exactly. If a number of such plates were required the workman would probably select the first perfect plate and use it as a pattern through which to bore the remainder. If thousands of such plates were required a drilling machine capable of drilling all four holes simultaneously could be employed. In such a machine the relationship between the holes, their location on the plate, and their inclination would all be perfectly controlled

by the precise relationship between the parts of the machine itself. In addition it would be power-driven and the workman would only have to place the undrilled plate in the machine and press a button to start its operation. Such a task can be done by an unskilled laborer. All the skill has been transferred to the machine, which requires only an attendant. A final step is sometimes taken in the modern factory where automatic machines are installed. Continuous belts feed the raw material to the machine and remove the finished product while the machine itself operates continuously under automatic safety devices which will stop the mechanism if the material jams or something goes wrong with the working parts. Such automatic machines are a far cry from the handicraft labor of the feudal period, but the Industrial Revolution laid the basis for these amazingly ingenious modern developments.

A *third* shift involved the abandonment of the home as the center of productive activity and the substitution of the factory. As long as tool methods predominated the home workshop was the typical place of labor, for the advantages of supervising many workers under one roof in a large central workshop were more than offset by the cost and maintenance of the building and tools. But the use of expensive power-driven machinery made the factory not only economically practicable but technically essential. It was neither financially nor technically feasible to place a power loom, for example, in each weaver's home. When the worker who had labored in his own home under the guild system and the domestic system was uprooted and placed in a factory it necessarily meant a vast and vitally disturbing change in the pattern of his everyday life. Large groups of people can not be easily handled without regimentation. Factory workers, consequently, were subjected to a rigid discipline and routine. They were required to be at work at a certain hour which they did not choose and over which they had no control. Likewise the time for eating and the time for stopping work were strictly specified. No loafing on the job was

permitted. Foremen or supervisors were employed to see to it that these and many other rules were carefully observed. The noise, smoke, dirt, routine, constant attention, and irksomeness of the factory discipline became ever-present features of a workman's waking hours and, no doubt, often returned to haunt his troubled sleep.

The introduction of the factory system also had the effect of concentrating industry in restricted areas. This necessarily required a concentration of the laboring population in the same area, thus removing thousands of workers from homes surrounded by garden plots and placing them in poorly lighted, inadequately ventilated, and overcrowded tenements in the vicinity of the factory they served. All too frequently these shifts resulted in a lowering of moral standards and a degradation of living conditions.

b. SPECIFIC FEATURES: The factory system itself is the most obvious feature of the industrial reorganization occasioned by the Industrial Revolution. Disruptive as it was to the worker's cherished behavior patterns, unfortunate as its immediate effects were upon living conditions, opposed as it was by special-interest groups and powerful institutions, its establishment was never seriously threatened. The enormously increased efficiency and productivity of the power-machine process rendered all previous methods of organization unable to compete with the factory system. As the domestic market in England and the foreign markets of the world continued to expand they held out still greater inducements for further technical advancement. The profit opportunities offered to the rising industrial capitalists increased and the gains actually realized warranted the investment of more funds in the new business ventures under the new type of factory organization. The capital fund which had been accumulated in England chiefly from commercial and financial pursuits now flowed rapidly into industrial ventures. This organization of men and machines under the control of a profit-motivated industrial entrepreneur became the dominant economic institution of the

day and lent its distinctive character to the entire period of industrial capitalism.

The localization of industry may be regarded as a feature of the industrial reorganization of the period in spite of the fact that there had been some localization prior to the appearance of the factory system. This is not surprising, since the localization of industry is really a form of specialization in which a region devotes its major energies to the production of those commodities for which it is best fitted by climate, topography, and natural resources. The large-scale production for a world market upon which English industry had embarked merely accelerated the process. A coastal region abounding in lumber specialized in shipbuilding, while an interior region plentifully supplied with deposits of coal and iron ore attracted the iron industry.

c. SOCIAL CONSEQUENCES: Instead of welcoming the advent of machines as the force which would liberate them from their labors the working classes looked upon them with open hostility. They observed that skilled workers were replaced by unskilled machine tenders and that the wage levels fell. They likewise observed the rising costs of living to which bad harvests, Corn Laws, and periods of war all contributed.

But all these combined were probably less serious than the changed relationship of the worker to the land. In the crowded squalor of the factory town he missed the former independence afforded by his own hut and plot of ground. But even more he missed the fresh vegetables, the dairy products, and poultry which his family had once produced upon their own land. Now that the meager wages earned through interminable toil had to supply all the family's needs such products were rarely on the family table. The incessant demands of the landlord were irksome in the extreme. Very frequently the employer, the landlord, and the storekeeper were the same individual. The hovels and the store were operated for a profit as was the factory. The system of paying workers in credit redeemable only

at the store, where prices were excessively high, was another method of raising the cost of living.

Small wonder that women and children found their way into the factories in order to help augment the family income. The employers found them very desirable since they were much more docile than the men and could be imposed upon with greater impunity. Since they were paid lower wages they provided a cheaper supply of labor. Foremen claimed, in addition, that they were easier to train. In some cotton mills an adult worker was not given a job unless he brought a child to the mill with him. It was in the employment of children that the factory system reached its lowest depths. Children from five to twelve years old entered the factory gates at six in the morning and did not leave again until seven or eight at night. After observing the conditions one West Indian slave master was moved to remark, "I have always thought myself disgraced by being the owner of slaves, but we never in the West Indies thought it possible for any human being to be so cruel as to require a child of nine years old to work for twelve and a half hours a day."

The lot of the English factory worker in general was so deplorable that the condition of the American negro slave in the same period was in many respects preferable. The slave had, at least, an abundance of fresh air, substantial food, and hours for rest and recreation. The factory employee had none of these. One father testified to the factory commissioners in 1833 as follows: "My two sons (one ten, the other thirteen) work at the Milnes' factory at Lenton. They go at half-past five in the morning; don't stop at breakfast or tea time. They stop at dinner half an hour. Come home at a quarter before ten (at night). They used to work until ten, sometimes eleven, sometimes twelve. They earn between them 6s. 2d. per week. One of them, the eldest, worked at Wilson's for two years at 2s. 3d. per week. He left because the overlooker beat him and loosened a tooth for him. I complained, and they turned him away for it. They have been gone to work sixteen hours now; they will

be very tired when they come home. I have a deal of trouble to get 'em up in the morning. I have been obliged to beat 'em with a strap in their shirts, and to pinch 'em, in order to get them well awake. It made me cry to be obliged to do it."

In the textile trade the conditions were particularly bad. The early capitalists took full advantage of the social misery produced by the urbanization movement and the ruination of handicrafts to cut production costs and amass fortunes. It was not uncommon for orphans, the children of paupers, and other wards of the community to be apprenticed to the owners of factories who kept them in isolated buildings where no one might see them and take pity on their sufferings. The foreman drove them unmercifully since his wages depended upon the amount of work done under his supervision. The working day was only limited by the exhaustion of the children. Children of five to seven years of age worked sixteen hours per day, ate putrid food barely sufficient to keep their bodies alive, and slept like animals on rags and straw beneath the machines which they tended. In some factories the machines and the beds "never got cold" but were kept busy constantly by running two shifts of children.

The worst conditions prevailed among the parish wards. Lots of fifty or more were herded like cattle to the factory, where they remained imprisoned for many years. Some parishes stipulated that the buyer should take idiots in the proportion of one to every twenty children. The horrible account of Robert Blincoe's sufferings as a factory apprentice has become a classic. In 1799 he was sent with a batch of eighty other boys to Lowdham, where they were all whipped more or less constantly during the day both as punishment for very minor faults and in order to keep them awake and at their tasks when they were dropping with weariness. Later Blincoe worked in the factory at Litton, where matters were much worse. The employer, Mr. Needham, kicked the children, hit them with his fists, and pinched their ears until his nails met through the flesh.

Robert Woodward, one of his foremen, was even worse. He conceived the idea of filing Blincoe's teeth down and on another occasion made him work practically naked in winter. Blincoe's scalp was sore all over from continuous beatings. In order to cure this pitch was put on his head and then pulled off, tearing out his hair. On still another occasion Blincoe was hung up by his wrists over moving machinery so that he had to keep his knees bent or be maimed for life. As a means of regaining their lost freedom many of the children tried to commit suicide, considering death preferable to life under the conditions as they knew them.

It is only fair to point out that not all factories were as bad as the factories employing pauper children but conditions in general were such that there was vigorous opposition. In 1802 the "Health and Morals Act" forbade the apprenticeship of children under nine in the mills and reduced child labor to twelve hours a day. Gibbins very pertinently remarks, "that during this period of unheeded and ghastly suffering in the mills of our native land, the British philanthropist was occupying himself with agitating for the relief of the woes of negro slaves in other countries. The spectacle of England buying the freedom of black slaves by riches drawn from the labour of her white ones, affords an interesting study for the cynical philosopher."

Although conditions of employment for adult men never approached the levels of degradation nor exhibited the cruelty found in the employment of children there was sufficient cause for complaint to produce actual street riots and the destruction of the machines by workers.

The introduction of machine-equipped factories fundamentally changed the conditions of competition. Workmen had formerly competed for the patronage of customers under the gild system. With the advent of the domestic system they had been forced into a price competition on the basis of piece-rate wages. The worker still retained the power to determine the hours and conditions under which he worked, however. But when productive efficiency finally



required the use of power-driven machinery the control of the means of employment passed entirely out of their hands. Capital was required in order to engage in industry as a "producer" and this the workers did not have. The ownership of a factory and its machine equipment carried with it the power to give or withhold employment, to control working conditions, and to determine hours. Labor became merely one of the necessities of production to be purchased in the market at the lowest price attainable. Workers' hearts were filled with bitterness and resentment against the machines. It was quite fruitless to explain to them that the lower prices would in the long run create a wider market and that ultimately more jobs would be available in production and in the building of factories and machinery. It was but small comfort to know that the next generation would reap the benefits of their misery. It seemed obvious that the increased productivity of the machines could mean but one thing—the employment of fewer laborers. They were keenly aware of their new circumstances, in which they no longer owned the materials upon which they worked, nor the machines, nor the place of employment, nor the finished product. They had nothing to sell but their labor time and that was highly perishable. If one day's labor was not purchased by an employer on that very day it was lost forever. These conditions intensified the competition of laborers for employment, made them bid against one another and accept lower and lower wages. Men not only competed against men, but also against women, children, and the machines which devoured the jobs of all of them. David Ricardo writing in the midst of these conditions advanced the "iron law of wages," contending that the remuneration received by laborers tends to fall to the minimum necessary for subsistence.

## B. SECONDARY CHANGES

As soon as the experimental attitude had become common and the flood of inventive genius had been released,

technical improvements and innovations appeared in many fields.

1. **MINING:** Because of the demand for fuel, coal mining felt the impact of the new technology at a relatively early date. In 1689 gunpowder was used for blasting coal in the Cornish mines. In 1705 the steam engine was employed to pump water from the mines. In 1753 iron wheels and rails made their appearance but the steam locomotive was not used in the mines for hauling coal until 1829. In 1782, however, the steam engine was used for hoisting coal to the surface, and in 1838 iron cable was introduced. Compound ventilation was first installed in 1810 and the practical safety lamp (Davy type) made its appearance five years later. The safety fuse was developed in 1831. The net result of these various improvements was to bring the more advanced mines by the middle of the nineteenth century to a state of technical operating efficiency equal to the present standards of operation in the average mine of today.

2. **COTTON TEXTILES:** The new technology found application in the cotton industry much earlier than it did in the woolen industry. There were a number of reasons for this priority. In the first place, the powerful but decadent craft guilds, which still controlled the woolen industry in the eighteenth century, stoutly resisted the introduction of new methods. Secondly, conditions in the market for cotton cloth were altered by a style change in women's clothing, which required more and lighter goods for skirts, and by the restrictions upon the importation of cotton cloth without a corresponding restriction upon the importation of raw cotton. Finally, cotton fiber was more suitable for use in power driven machines than was wool fiber.

In 1733 Kay invented the flying shuttle and doubled the output of the weavers. This enabled them to weave cloth faster than the existing spinners could produce the thread. In 1764 Hargreave's spinning jenny increased the output of the spinning process some seven or eight times. Five years later Arkwright's water frame made a still further improve-

ment. Spinning was placed still further ahead of weaving in 1779 by Crompton, who invented the spinning mule. By this time weaving was far behind spinning and attention was turned to its improvement. In 1793 Cartwright invented the first practical power loom. Its efficiency was so great that it more than closed the gap between weaving and spinning. So much cotton was now used that the supply was inadequate and prices were rising. But in 1793 the invention of the cotton gin for separating the cotton seeds from the fiber by machinery instead of by hand greatly reduced the cost of production and made an abundant supply available. From then on the mechanization of the cotton industry moved swiftly forward and the mechanical processes were soon adapted to the production of other textiles.

3. TRANSPORTATION: Road building suddenly emerged from an era of mud trails to one of scientifically constructed highways. In 1787 Thomas Telford began to build roads with a stone foundation and a crowned surface to insure proper drainage. Such roads could be used in bad weather as well as in good. In 1815 John Macadam evolved an improved method. He removed the soil from the roadbed to a depth of fourteen inches and replaced it with a seven-inch stratum of coarse cracked stone. Over this a second layer of smaller cracked stone was laid, and the top was finished with a covering of stone crushed almost to dust and rolled smooth. By 1850 the more densely populated sections of England were provided with a fairly adequate network of durable and serviceable highways.

The first canal in England was built by parliamentary authorization in 1759 to serve the new coal industry. It was only seven miles long and connected the collieries belonging to the Duke of Bridgewater in Worsley with the market for his coal in Manchester, the new industrial city. The builder, James Brindley, was a blind, untrained engineer but in spite of his handicaps he successfully completed the locks, tunnels, viaducts, and extensive cuts. This canal seems to have been constructed without any reference to the Continental

experience gained in the previous century during the construction of the 148-mile French Canal du Midi. Nevertheless, Brindley's success attracted English attention and England was literally covered with a network of waterways. By 1830 there were some 3,000 miles of canals in England and Wales. Eight years later it was said that there was no place south of Durham county which was more than fifteen miles from a canal or waterway.

The long and complicated history of the development of railway transportation would be out of place at this point but it is worth while to note that one of the most significant uses of the steam engine was in the hauling of freight and passengers. Although a number of experiments and a few short lines had been constructed in England before 1830 it was not until the initial operation of the Liverpool-Manchester line in that year that steam rail transportation really made its bow to the world. By 1855 there were 8,053 miles of railroad in the United Kingdom and this was doubled in the next twenty years. It was in the United States, however, that the most spectacular development took place in railroad construction.

### III. CONSEQUENCES

The results of the Industrial Revolution were manifold. But the paramount consequence of the entire period with its divergent forces and its myriad changes is to be found in the form of modern society, industrial capitalism. Its chief characteristics are briefly sketched in the next chapter.

The more immediate consequences of the Industrial Revolution were observable during the first half of the nineteenth century.

#### A. EXPANSION OF THE MARKET

The lower costs of factory production made the products of the new technology available to large groups of persons in England who had previously been unable to afford them.

The improved roads and the new canals reduced the cost of transporting goods and enlarged the area of sale for the early factories. The development of the steam railroad further facilitated the transportation of goods on land, and the application of steam to ocean navigation placed the New as well as the Old World within easy reach of the English factories and mills.

In addition to lower costs and improved facilities for the physical distribution of goods, the market was augmented by an actual increase in the number of buyers. The constantly growing colonial empire added not only the demand of native populations in backward areas but also that of thriving groups of emigrants from the homeland. In spite of the heavy drain of emigration the domestic population of England and other capitalistic countries also grew rapidly. Many, perhaps most, of these increasing millions could not afford the middle-class comforts of life but all had to be fed, clothed, and housed.

Population increased with unprecedented rapidity as soon as the revolutions in agriculture and industry got under way. From 1700 until 1750 the population of England had increased scarcely a million and stood in the latter year at slightly over 6,000,000. From 1770 to 1800, when the new productive techniques were just beginning to be used, the population of England increased nearly 30 per cent or approximately 2,000,000 people. But in the next period of similar duration, from 1800 to 1830, when the general effects of machine production and crop rotation began to accrue, the population jumped more than 5,000,000 or nearly 60 per cent.

## B. URBANIZATION

More important than the increase in population was the change in its distribution. The shift of population from the agricultural districts to the commercial and industrial towns is known as urbanization and was the result of

several forces. First, the revolution in agricultural techniques and the rise of capitalistic farms had displaced thousands of rural tenants and workers. The eighteenth-century enclosure movement generated by these forces has already been described in detail. But the urbanization of England entailed more than the flood of displaced agricultural workers moving to the towns. The size and composition of towns themselves underwent an unprecedented change. Heretofore towns had been centers of handicraft, commercial, or governmental activities. But the revolution in the technology of production created new centers of industry and transformed old ones. Accessibility to a fuel supply became a new factor in town location. Furthermore, the factory system requiring the full time of men, women, and children caused the consolidation of town populations into mill districts. The domestic workers moved from their suburban huts into the cramped quarters of box-like houses standing wall to wall along narrow, filthy streets.

The industrial city was the stepchild of capitalism. The needs of production came to regulate the conditions of urban life. Profits, not human needs or welfare, decided in what types of towns, in what kinds of streets, and in what sort of houses the workers must make their homes. Cities grew without plan and with little consideration for the wants or needs of human beings. The industrial city, without beauty or method, marked the individualistic spirit of the age just as surely as the great cathedrals marked the otherworldly spirit of the Middle Ages. Despite the power and wealth which the new technology afforded, the life of the average city dweller sank to a new low during the first half century after Watt developed his practical steam engine. People worked longer hours under more fatiguing and less healthy conditions, they lived in filthy cramped quarters without running water or sewage facilities, and populated the cities with unwanted and uncared for children who often found surcease more quickly than their parents in paupers' graves.

### C. SOCIAL DISORGANIZATION

The appalling conditions which existed in the factories of the new industrialism have already been sketched. The new owners of factories and productive equipment abandoned all sense of social responsibility and entered upon a program of ruthless profit seeking. The proletariat became merely a labor fund to be applied in the most profitable manner. The early slave-owning capitalist had some consideration for his investment. Reasonable rest, plain wholesome food, and medical care were as necessary to protect his investment in a slave as in a horse. But the early industrial capitalists had no such pecuniary interest in the great mass of helpless human beings dependent upon them for livelihood. Fatigue, malnutrition, and disease were assumed to be the responsibility of the free laborer. What the laissez-faire advocates failed to see, then as now, was that economic freedom is a myth for those who are divorced from property. The new factories and furnaces, like the pyramids, told of man's enslavement rather than of his power. They cast their shadows over the society that took such pride in them.

Sanitary facilities were almost totally lacking in the early factories and the housing conditions in the industrial sections were almost indescribable. Whole sections lived without facilities for the disposal of sewage and with no adequate provision for a pure water supply. In fact, the first effort at factory reform did not appear until the fearful conditions in the congested, disease-infested, plague-breeding sections had threatened the whole population of Manchester with infection. Then the Health and Morals Act of 1802 was passed, but like the other early pieces of legislation it was largely ineffective because of the failure of enforcement. As late as 1837 it is said that one-tenth of the population of the great city of Manchester lived in cellars, which reeked with filth and bred perennial pestilence.

The unequal distribution of wealth and income constituted a second major factor in the social disorganization which the Industrial Revolution produced. The new *laissez-faire* system which followed the collapse of mercantilistic practices left the captain of industry free to manipulate the market in his own interest. The result was a free-for-all fight in which the strong, the clever, and the unscrupulous amassed fortunes and personal industrial empires which they proceeded to hold against all comers by monopoly positions, patent rights, or property ownership. But while colossal new industrial fortunes were being built large urban populations were being subjected to a new type of pauperism. In the early days of competition capitalists used all their power to oppress the laborers, driving wages down to the starvation point. Urban poverty has remained as a disturbing social sore upon the body politic. Many types of legislative remedies have been tried but none has eliminated the problem. Henry George compares the astounding technical progress of the eighteenth and nineteenth centuries to a gigantic wedge driven through society. That minority of fortunate individuals above the wedge found their living conditions elevated, while the many unfortunates below the wedge found their social and economic status depressed by an irresistible force. Society was divided into two major social classes, the bourgeoisie and the industrial proletariat. The diminishing agricultural population did not fit precisely into either class.

It is important to note that business cycles, a third aspect of the social disorganization following the Industrial Revolution, are a product of the very success of the bourgeois class and its institutionalized techniques. It was not by accident that cyclical fluctuations in business accompanied by periodic gluts of the market first appeared after the introduction of capitalistic methods in industry. The rapid expansion of productive capacity was not accompanied by an equally rapid expansion of the capacity to



consume on the part of the employed population. The low levels to which industrialists drove wages in their effort to reduce costs to a minimum did not permit the recipients to buy much beyond the bare essentials of life. Of course, the profits of the owners placed great purchasing power in their hands. But the important fact to note is that only a small part of the sums in their hands were spent for the products of industry; the larger part went for the expansion of the productive capacity through the erection of new mills and additional factories. This increase in production was absorbed, for a time, by the expanding market at home and abroad. But with periodic persistence the ugly phenomenon of underconsumption and overproduction made its appearance. It has become one of the most serious problems of industrial society.

#### D. INDIVIDUALISM

These appalling social conditions were not so much a result of the new machine technology as of the breakdown of governmental regulation of economic activity. For more than two centuries Mercantilism had been the major social control. The growth of nationalism had coincided with the rise of commercial capitalism. The interests of the early bourgeoisie had been furthered by the regulation of national life by the state. Policies similar to those of the guilds had been expanded to cover the whole nation. As long as the theater of bourgeois activity had been in the conquest and exploitation of distant lands and in the manipulation of markets and money systems, the regulation of domestic economic activity had not conflicted with the interests of this dominant class. But when power technology and the development of vast proletarian markets created profit opportunities at home, the interests of the new industrial bourgeoisie came into violent conflict with the mercantilistic policy of government. The aim of Mercantilism had been the development of a strong militaristic state;

the aim of the new bourgeois leaders was individual gain. Mercantilism had regulated industry not to promote efficiency and assure profit but to produce the most favorable balance of trade and to build up the economic self-sufficiency of the nation in time of war. Industries which had no economic basis for existence had been fostered by tariffs or bounties. Others had been discouraged or repressed because they caused a rise in imports and had thereby tended to drain gold from the country. The new capitalist class saw every transaction as a source of profit. Exchange could be maximized only when each region specialized in that for which it was best fitted by climate, topography, or natural resources, without regard for political or social considerations. Competition was the automatic regulator which would guide all economic activity to the highest peak of efficiency. The intellectual apologists for the profit system even enlisted the support of the proletariat for the new system by pointing out that society would be wealthiest and happiest when each individual could dispose of his personal talents to the best pecuniary advantage. Government regulation which hindered capitalistic enterprisers was replaced by free competition which exactly suited their purposes.

The repudiation of the state as a competent regulator of the economic system produced two major reactions. The first was political, the second economic. While Adam Smith and the classical economists were discrediting the mercantilistic state for interfering with the right of each individual to sell his services and use his property as he saw fit, Jean Jacques Rousseau was denouncing the monarchistic state for depriving man of his political liberties and his right to "life, liberty, and the pursuit of happiness." The American and French Revolutions were but political manifestations of the revolt of the new middle class against the policies of the state. The belief that all men are created free and equal fitted perfectly with the bourgeois demand that each man be free to work out his own economic destiny. The political

reaction was democracy; the economic reaction was industrialism.

With the triumph of individualism and the adoption of a laissez-faire policy by the government the profit motive became the dominant drive of society. The welfare point of view which had been championed by the medieval Church and which had formed a part of the gild and mercantilistic regulations was crushed. It reappears in modern society only in those sectors not essential to the functioning of the economic system. The slogan "business is business" became the motto by which businessmen justified their disregard of human considerations.

The Industrial Revolution solved the technical problems involved in the production of goods and their physical distribution but it created the much more difficult problem of the distribution of adequate purchasing power without which the industrial system itself becomes paralyzed.

## E. GOVERNMENT REGULATION

Instead of bringing a better life to more people the new industrialism spotted its first home, England, with squalid cities, moaning slums, and a growing social unrest. The "guiding hand" of Adam Smith led not to life, liberty, and the pursuit of happiness, but to fears, insecurities, and an early grave. The profit motive certainly did promote industrial efficiency but it did not build a moral civilization or produce general welfare. After half a century, laissez faire had failed and the common man looked toward his new servant, democratic government, for the protection which the economic system failed to provide. In 1819 the first feeble Factory Act abolished work in cotton mills for children under nine years of age and restricted the working hours to twelve per day for those under sixteen. From then until the present day the problem of industrialism has been the distribution, not the production of wealth. Social planning has become ever more urgent as the forces of technology have brought society at an accelerating rate

from an economy of scarcity to one of potential abundance. Power technology has created an interdependent society. Today the state can no longer be a mere referee in the individualistic game of profit seeking but must become a champion of the people for whom the economic system exists.

### STUDY QUESTIONS

1. In what sense may the Commercial Revolution be called the chief cause of the Industrial Revolution? Discuss the chief phases of this relationship. In what sense was each movement revolutionary?
2. Contrast the forces aiding and those opposing the development of machine technology in the seventeenth century. What was the significance of each of the following in the development of technology: Royal Society of London, sketchbooks, and projectors?
3. Discuss the fundamental changes in the techniques of production from the standpoint of specialization, the development of machines, and the application of non-vital power.
4. Why is it misleading to refer to steam engines prior to the time of Watt? How does the early history of the steam engine demonstrate that "Necessity is the mother of invention"? Can you draw any conclusions concerning the role played by the inventor in the inventive process from your study of the development of the steam engine?
5. Give date, name of inventor, chief functions of device, and significance of the outstanding improvements in textiles, 1730-1800; steam power, 1700-1830; and iron and steel production, 1730-1850.
6. What underlying conditions made possible the large-scale production methods which attended the development of the factory system? Why was the factory system never developed to any extent prior to the advent of the true steam engine? Discuss the chief effects of the factory system.
7. What are your reasons for believing that the term "Industrial Revolution" is well chosen or ill chosen to describe the period 1750-1825 in England? Why did the Industrial Revolution come first in England?
8. What were the chief social changes attending the first phase of the Industrial Revolution? Why did pauperism increase in England (1780-1840) when production was becoming ever more efficient? How did the early phases of the revolution affect labor? Briefly outline the history of the English Poor Laws. How do they reflect the cultural pattern?

9. Show the inter-relation of improvements in manufacture and in transportation. List the outstanding improvements in transportation from 1700–1850 giving date, name, inventor, and significance.
10. Discuss the triumph of individualism (*laissez faire*) in relation to the American Revolution, the French Revolution, Chartism, and economic theory.
11. On what bases may the Industrial Revolution be divided into periods or phases? What are the characteristics of each period? Why do you agree or disagree with those who insist that the Industrial Revolution is still in progress?

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## Chapter Ten

# Industrial Capitalism

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### I. INTRODUCTION

From a cultural point of view the Industrial Revolution marked the transition from a nascent stage of capitalism to a mature one. During the period of commercialism, the great majority of people in Europe followed a pattern of life differing but little from that which had characterized the manors and towns for eight centuries. With the rise of power technology, however, capitalism became a way of life for the majority of Europeans.

#### A. GENERAL PREREQUISITES

At an earlier point we have discussed the primary conditions which had to exist before capitalism could appear. Far back in the first Temple Town culture arose the *economic surplus*, the cornerstone of capitalism. But it was not until late medieval times that the controllers of this surplus diverted part of it into wealth-producing activities. This part, the *capital fund*, arose simultaneously with a profit-seeking class, the *bourgeoisie*. In fact, the appearance of gain opportunities and their recognition by this small extra-feudal class were the immediate causes for the diversion of part of the accumulated wealth from luxurious consumption into wealth production. The Commercial Revolution was, in one sense, merely the spread of capitalis-

tic activities over great areas. A strong *government* to enforce contract and to maintain property rights, a *price system* to measure gain, and profitable opportunities in the form of a *market* had all been attributes of the city-states of Italy, where the earliest bourgeoisie manipulated the first capital fund. By the eighteenth century these prerequisites were present in all the major countries of Europe. Commercial and financial capitalism had become the dominant pattern of bourgeois life. Before the new cultural pattern of industrial capitalism could become a functioning reality certain additional changes had to take place in the social milieu.

## B. SPECIFIC PREREQUISITES

1. MACHINE TECHNOLOGY: First the industrial arts (technology) had to reach a stage where ownership could dictate the conditions of production. So long as men had access to land for the raising of food and so long as simple tools and muscular energy were the only essential elements of production, property could not be used as a control device in industry. Feudal rights in the soil and handicraft methods of production were the bulwarks of the underlying population. The dualistic morality of the late Neolithic village, the medieval manor, and the chartered town had been expanded to national proportions. Indeed, the "in-group" had become European rather than national. The Commercial Revolution turned the eyes of all nations upon the newly discovered "outer world." The expanding mercantile activities of the bourgeoisie found a new sphere for the revival of the ancient method of increasing the economic surplus. The unfortunate natives of central and south America toiled under the slave driver's whip in the specie mines while negroes from Africa slaved in the fever-ridden swamps of the West Indies to supply Europe with sugar, molasses, and rum. These early slaves were capitalism's first labor supply. But the lingering welfare attitude of the medieval Church and the strong gild

organization of towns kept slavery from invading Europe. The Christian brotherhood of white men and the craft-gild fraternal and mutual-aid attitudes proved too strong for even the bourgeoisie to break down. Slavery, therefore, could not be used to harness the underlying population of Europe and as yet the ownership of materials and control of markets gave the bourgeoisie no direct control over the life of the average man.

2. CONCENTRATED URBAN MARKETS: The second prerequisite for industrial capitalism was concentrated and accessible markets for commodities produced on a large scale. Markets capable of absorbing ever larger amounts of common, everyday commodities first had to be developed. Until the eighteenth century the chief markets for the goods gleaned from the four corners of the earth by the bourgeoisie had been the armies and navies of governments, the increasing number of state employees, the professional classes (especially churchmen and lawyers), and the declining nobility. The great mass of the underlying population secured the few essentials of their existence from medieval sources. These had not become an integral part of the new order of things.

The development of machine technology and the rise of the proletariat have already been described as phases of the Industrial Revolution. As power-driven machines became more efficient and, in terms of product, less costly than handicraft methods, labor lost its claim to control of production. The factory with its central power plant and battery of noisy machines became the core around which the production of physical goods centered. Labor became a commodity, merely one of several factors of production. Skill and power were inherent attributes of steam-driven machines and the dignity of labor was lost forever. Man was simply a machine tender adjusting his movements to the tempo set by the tireless mechanisms. The owners of the machines and the factories now held the key to production. No longer could man produce as he or his im-

mediate neighbors required the product. He must sell his energy as a commodity to the owners of capital goods and must seek the satisfaction of his basic wants in the impersonal pecuniary maelstrom of the market. Machine technology laid the basis for the bourgeois control of production.

3. THE PROLETARIAT: The last prerequisite for industrial capitalism, the proletariat, was a by-product of machine technology. A *propertyless class of wage-dependent workers* comprised the proletariat and served capitalism in several vital ways. First, such a class furnished a low-cost flexible supply of energy for the operation of the new factory system. Being without access to land, materials, tools, or market, the proletariat were forced to accept such work at such wages and at such times as the profit motive of factory owners dictated. Under the early factory system in England wages fell so low that the classical economists came to speak of subsistence wages (just enough to maintain the required supply of workers in operating condition) as the "natural" rate. Since the price of labor was a cost of production, low wages seemed a necessity for high profits. Such an attitude was indeed logical but involved a fallacy for it did not take into consideration the second function of the proletariat, that of constituting a major demand for goods.

Machine technology was infinitely more efficient than handicraft methods. Greater efficiency meant greater output per hour, per dollar, or per worker. Under free private enterprise anyone with the necessary capital could build a factory, buy materials, and hire workers. But profit depended upon selling the product at a price in excess of the total costs of production. Expanding production required expanding markets and the proletariat was the greatest potential market on earth. The early industrial capitalists fell into the error of the mercantilistic capitalists. They thought of workers merely as an object of exploitation and not as buyers of the product. Prior to the rise of

industrial capitalism markets were exogenous, that is, they consisted of people outside of the sources of supply: financiers, merchants, government agencies, nobles, and higher churchmen. But industrial capitalism required an endogenous market, that is, one consisting of enterprisers and their employees. The proletariat furnished the demand which made large-scale production possible. But individual enterprisers did not see the picture in its broad sweep. With expanding colonies demanding manufactured goods and with mercantilistic ideology prevalent in business, the early industrial capitalists took the market for granted and busied themselves with the task of lowering the costs of production. They took the easiest but most disastrous way—beating down wages. However, as students of cultural evolution we must not be unduly critical of such a short-sighted policy, for laissez-faire economists and liberalistic philosophers themselves required nearly a century before they perceived the fallacy of low wages. Even today many industrial giants in enlightened America believe that high wages are incompatible with high profits.

The important fact to remember here is that, with the rise of machine technology, intensive urban markets, and the transformation of the vast underlying population into propertyless, wage-dependent proletarians, all the prerequisites of industrial capitalism had appeared. The objective of the bourgeoisie gradually shifted from the exploitation of new regions and primitive peoples to controlling and supplying the insatiable wants of man for profit. The die had been cast and Europe entered upon a cultural pattern which was destined to enmesh the entire earth in its web of interdependency.

## II. NATURE OF INDUSTRIAL CAPITALISM

Because capitalism is an economic system and forms the basis for the whole existing cultural pattern no single definition is adequate. Fundamentally, capitalism is a system of manipulation of material and non-material

wealth by private persons for the purpose of increasing their personal share. It is an economic system in which production for market is carried on by individuals for private profit and in which private property and freedom of contract are basic institutions. Such definitions are satisfactory only when we understand the techniques, terms, and processes involved.

### A. TECHNIQUES

1. **MANIPULATION** is arrangement or control of things or ideas for the purpose of achieving some definite result. Manipulation is a function of private property; the power of an individual to use or control his environment according to his own wishes depends upon group sanction. This sanction is embodied in the laws of property and enforced by the group through its agent, the government. The earliest forms of manipulation for profit were commerce and finance. Industrial manipulation achieved importance only when processes had been elaborated and had become specialized. The market is the focal point toward which the manipulation of all goods and services is directed.

2. **PRICING** is the fundamental technique used to determine the amount of gain. All wealth must be convertible into the accepted unit of measurement. Ownership becomes sharply distinguished from possession. The wealth of a participant in the capitalistic process is reckoned not by his possessions but by his control over valuable things. These control shares or property rights determine the status of the owner by conditioning the distribution of want-satisfying goods and services. High status depends not upon the wisest utilization of goods nor even the use of the greatest amount of them but rather upon the relation one's control bears to that of any or all others. Acquisition of property rights rather than the use of wealth becomes the objective. The relative worth of one's property rights is expressed as value so that valuation becomes the immediate measure of success. The process narrows

down to an effort to control some one or more items so as to trade them for the largest possible amount of all other items. Monopoly is the highest bargaining position and represents the objective of each individual.

To one living in the modern order all this is expressed by the simple phrase "getting the most for the least." Obviously one will have to give the least of his property in exchange for what he wants when his property is very scarce. Scarcity is a function of human wants and a thing is scarce whenever the amount people want or demand exceeds the supply available. One's economic power in a market-centered money economy will depend, therefore, upon how much of the available supply one owns and the intensity with which others want it. In the modern world most want-satisfying goods can be increased by production, which in its broadest sense means changing the form of raw materials (natural resources) and making them available where they are wanted (transportation) and when they are wanted (storage). To control production, therefore, is to control supply. Likewise, to control people's wants through advertising is to control demand. The two give a manipulator a unique position, for as his control becomes more nearly absolute his bargaining power in the market increases. The value of his product rises and he is thereby enabled to acquire an increased share of all the other things the market affords.

## B. TERMINOLOGY

Capital, capitalistic, capitalism, and capitalization are terms of similar spelling but they vary greatly in meaning.

1. CAPITAL is the basic ingredient of industrialism. It is the surplus wealth which is devoted to the production of more wealth. The most common form of capital is money or credit. Of course, neither money nor credit is capital as such but merely a form of wealth which can be so used. A merchant may invest \$1,000 in a lot of spring dresses which he believes he can sell to the bourgeois-minded

women of the town for twice that sum. The money or the dresses are his capital. When he has sold the lot for \$2,000 he has regained all the money originally invested and realized a profit of \$1,000 or 100 per cent upon his capital. This \$1,000 profit may be reinvested in his business, in which case it becomes part of his capital; or it may be spent for food, clothing, or amusements, in which case it becomes consumption goods and thus increases his psychic or real income but not his money income. Only wealth devoted to the acquisition of a larger monetary income can be termed capital. Viewed from the standpoint of modern production, capital is any wealth used in producing more wealth. All the intricate machinery, physical plants, and stocks of raw materials are part of the company's capital. Since the advent of machine technology the amount and value of industrial capital has steadily increased. Businessmen commonly speak of all materials, machines, buildings, and equipment used in the conduct of an enterprise as capital goods. Of course, such capital goods are subject to classification into transient and permanent types but this does not concern us here. The important characteristic of capital which distinguishes it from all other forms of wealth is that in all cases it is used for the production or acquisition of more wealth.

2. CAPITALISTIC is a term having two connotations. In the simpler and more direct sense "capitalistic" refers to the employment of capital in a process or method. In the broader sense it refers to certain characteristics of the cultural pattern called capitalism. In this sense the emphasis is not upon the use of capital in some process. A few examples will help to make this clear. The phrase "capitalistic methods of production" clearly refers to the use of capital goods in the technological process of production. It indicates that the roundabout methods of modern industry are used and has no necessary relationship to capitalism as a cultural pattern. The phrase "capitalistic ideology," on the other hand, refers to the goals and thought patterns



characteristic of capitalism. Here, the emphasis is clearly upon the ideological aspects of the system or culture called capitalism.

The fact that the terms "capital" and "capitalism" are so similar in form has lead to the erroneous belief that they are inseparable. It is true that capitalism does require capital, at least in a pecuniary form, but it does not follow that the use of roundabout methods of production (capital equipment) necessarily results in capitalism. Capital equipment can be individually owned and operated for private profit as is the case under capitalism, or it could be socially owned and operated under socialism.

When the term "capitalistic" is used in its technological sense it refers to the use of roundabout methods of production. Many common articles can be produced directly or with a minimum of tools and equipment. Shoes, for instance, can be fabricated with nothing more than a few crude hand tools. Under capitalistic or roundabout methods great factories are first built and equipped with a vast number of engines, machines, and tools. One whole factory will produce nothing but tanned leather, another nothing but eyelets, nails, and cleats, another only thread and strings, still another specializes in dye, polish, and dressing, while the main factory acts as an assembly plant and, in addition to cutting the various grades of leather into required shapes and sizes, combines all raw materials into the finished product. Before a single pair of shoes can be produced by this capitalistic method months of toil must first go into the building of factories and machines and then still more time and effort into the building of an inventory of goods to be assembled into the finished product. Obviously such roundabout methods require a huge investment in capital goods and are properly called capitalistic.

3. CAPITALISM has already been defined but an important distinction remains to be made. Capitalism is the system in which capitalistic methods are employed by

private persons or corporations for personal rather than social profit. Each person or corporation strives to "get the market" and is quite indifferent to the capacity or output of other producers and to the total wants or requirements of consumers. If one company can ruin a competitor by price wars or unfair marketing practices or can induce buyers to pay high prices for shoddy but cleverly advertised merchandise, the company is considered a successful enterprise and the wasted capacity and lost investments of ruined plants as well as the reduction in the general welfare of the consuming public are all charged off as an inevitable consequence of an individualistic, competitive system. Of course, technological progress and a higher standard of consumption are more usual consequences of capitalism but these like the anti-social effects are not the result of plan or purpose but merely by-products of a profit-motivated individualistically-operated system of production and distribution. Capitalistic methods can also be employed in other types of economic organization. Such methods can be used under the dictatorial guidance of a Fascist state, under such a government as that in Russia, or under the control of workers' unions as would be the case in gild socialism. Today Russia is bending her energies to increasing her capital and employing it in capitalistic methods of production. But the system in which these valuable aids are used is not run for the private profit of individual enterprisers. Instead great state corporations employ them for the alleged purpose of social welfare rather than private profit. The methods are the same but the purposes and the institutional framework within which they are employed are vastly different.

4. CAPITALIZATION is a term which refers to the determination of the market value of an income-yielding right on the basis of some accepted rate of return. For instance, a patent or a storeroom may yield its owner \$1,200 per year in royalty or rent. The fact that the income-yielding right (the patent or storeroom) may have

cost its present owner much or nothing does not affect its value to others who seek investments. That value will be a capitalization of its yield. If the prospective purchaser considers 12 per cent to be the amount which a patent or real estate should bring in order to induce him to invest his surplus funds then he would pay \$10,000 for the legal claim to the \$1,200 yearly income. If, however, he should be willing to invest his money at 6 per cent then he could pay \$20,000 for the patent or the storeroom. The value of such income-yielding property will depend, therefore, upon the rate of return which investors demand. Obviously, investment means the use of capital for profit and is an attribute of capitalism. Capitalization is, therefore, a valuation technique peculiar to an economic system operating under the profit motive.

All these terms have come into prominence since the advent of industrialism. They are not confined in scope or meaning to industrial capitalism but have merely found current usage as capitalism has reached the mature or industrial stage.

### III. IDEOLOGY

Capitalism, particularly in its modern industrial form, is built around a core of beliefs and attitudes. All the material aspects are but expressions of these basic or guiding ideas. The ideology of capitalism contains three fundamental attitudes.

#### A. GAIN

The objective or goal of all economic activity under capitalism is gain or acquisition. Usually the immediate objective is gain in terms of money. This idea of increasing one's pecuniary wealth stands in sharp contrast to the idea of livelihood which dominated all precapitalistic systems. From the earliest endeavors of Paleolithic man to modify his physical environment until the advent of the bourgeoisie, human wants guided the efforts of man. Even

among the control classes the objective of exploitation was the human satisfaction of a more abundant life. Often this took the form of ostentatious display, domination of lesser peoples, or the acquisition of social status but always the human element was the ultimate objective. Among the vast majority of the underlying populations, livelihood and group welfare constituted the objectives of both production and consumption. With the decay of Rome, the last in a long series of Temple Town civilizations, the medieval Church extended its sway, and welfare became the primary economic objective of all persons under its jurisdiction. Goods were produced in order to meet the needs of consumers and to provide a traditional standard of living for all participants in the economic process. Physical welfare and ultimate salvation became the primary objectives of all effort.

Under acquisitive capitalism the human element conditions economic effort but does not constitute its goal. Human wants still dictate to a large extent the type and amount of goods produced, but the objective of the producer is not to satisfy these wants nor even to obtain the means of satisfying his own. An abstraction of the material basis of life—money or exchange value—becomes the focus of all effort. The gain spirit recognizes no limits. No stock of goods nor fund of exchange power, however great, is sufficient; the measure of achievement lies in the amount of increase, not in the amount possessed. Gain is a limitless concept and gives capitalism its dynamic potency. The fundamental purpose of private enterprise is the use of wealth not for human satisfactions but for increasing wealth. All previous economic systems predicated the increase growing out of the wants of persons or groups. Capitalism converts a former means into an end: expansion, increase, acquisition, in short gain for its own sake not for some ultimate purpose. With boundless acquisition as the only objective, man soon came to evaluate everything in terms of its serviceability to business interests. Nature

became an object of exploitation, an instrument for production; human beings lost their significance as the end for which all things were produced and became merely units of labor power; life itself failed to be significant as an adventure or as a growth in powers of appreciation and became one grand commercial transaction with every deed, feeling, emotion, or reaction evaluated in terms of costs and returns.

## B. RATIONALITY

The evaluation of all things in terms of their contribution to the objective of limitless gain is the second core attitude of capitalism. When man seeks a steady and unflinching increase in market values it is but natural that he should adopt those forms of behavior which seem most rational, most systematic, and most effective in terms of results. This impersonal, matter-of-fact, cause-and-effect aspect of capitalistic ideology permeates the entire economic system. In business management rationality takes the form of long-range planning with the registration of all business facts in precise quantitative terms and the coordination of these records into a significant whole. Decisions are made and policies determined not in terms of tradition nor even personal ambitions but rather in terms of economic facts and their pecuniary significance. Exact calculation (accounting) rules the management just as precise measurement (scientific technology) rules production. Men and machines are combined into a functioning unit according to the cold impersonal dictates of the balance sheet. In the physical plant the rationalization of procedure determines the employment of the individual worker, the size and type of machines, and the design of the product most conducive to the ultimate capitalistic aim—profit. In the market rationality directs the purchase of materials and equipment and the sale of the product at the most profitable time or place and quite independent of any human or welfare considerations. The idea of strict adapta-

tion of all means to a single end permeates all phases of the social process and leads to a pure pecuniary evaluation of persons, objects, and events.

### C. COMPETITION

The rational acquisition of capitalistic enterprise is guided not by government agencies or bureaus but rather by the uncorrelated force of numerous individuals and groups each striving for the greatest possible gain. An individualistic, competitive attitude characterizes industrial capitalism. The system is often correctly described as one of free private enterprise. The individualistic ideal is a government which acts as a referee, enforcing the conditions of contract (assumably made by free individuals and without coercion) and leaving the entire direction of the economic life of the nation to the market conjunctures resulting from the efforts of those persons who assume the risks of business. Economic liberalism is a phase of the natural-rights doctrine which emerged from the reaction of the early industrial capitalists against the governmental restrictions of Mercantilism. Such liberalism is confined to a support of unbridled freedom in the field of profit seeking.

The unrestricted and individualistic pursuit of monetary profit must center in the market, where all efforts culminate as profit or loss. Such unregulated and uncorrelated efforts of thousands of profit-seeking individuals result in a competitive order. But, paradoxically, the objective of each competitor is monopoly. Each free private enterpriser hopes to attain the unique position of having the only monopoly in a competitive society. Each profit-motivated enterpriser abhors the idea of monopoly in the economic order but relentlessly endeavors to jockey himself into such a position. Obviously, a monopolist in a world of struggling competitors could easily play off the eager seekers for his controlled commodity so as to get the "very utmost for the very least." The competitive attitude is

therefore dualistic. No one will tolerate monopoly for others but each ardently seeks it for himself.

#### IV. STRUCTURE

Industrial capitalism was an inevitable consequence of the application of the capital fund to commerce and finance. We have already seen how the Commercial Revolution created a world arena for the efforts of the bourgeoisie. The business techniques of the Italian merchants and bankers were extended to the very margins of European penetration in new and old lands. The national states of Europe grew under the tutelage of the taxpaying bourgeoisie and extended the efforts of these gain seekers in foreign lands by the force of armies and navies and the organization of regulated companies. During this nascent stage of capitalism the activity of the bourgeoisie centered in bringing the natural resources and manufactured goods of distant places to the rapidly expanding home market. Commerce, pillage, piracy, and slavery were the forms of capitalistic enterprise abroad while banking and retail trade comprised the chief activities at home. But two forces gradually developed a new type of gain opportunity. The impersonal, matter-of-fact attitude inaugurated by the Renaissance and Reformation and supported by the bourgeoisie caused a rapid development of the physical sciences. At the same time the increasing population and urbanization movement created a vast market for the common necessities of life which the decadent gild system was unable to meet. We have seen how the bourgeoisie attempted to correlate the handicraft workers into a more efficient productive unit in the woolen industry. The clothier and his domestic system represent the earliest attempt to organize industry on capitalistic rather than handicraft lines. But this earliest attempt was more commercial than industrial since the power of the capitalistic clothier came from his control over the routing of the materials and the ultimate sale of the product. Industrial capitalism was

born when the Industrial Revolution transformed production from a hand tool to a power-machine system and at the same time created the greatest market opportunity of all time in the wage-paid underlying population—the proletariat.

### A. FEATURES

A more detailed examination of the structure of early industrial capitalism makes its chief characteristics clearly evident. The early economists correctly seized upon the market as the central phenomenon of the new capitalistic economy. It was in the market that prices were determined. It was in the market that the rationality of the buyer and the seller was exhibited. It was in the market that the forces of competition came to a focus. All the factors of the economic life revolve about the market in the same way that the spokes of a wheel rotate around its hub. However, it is not sufficient to point out the importance and central position of the market. It is necessary to examine the basis upon which it existed and to describe the forces which operated there.

1. **PRIVATE PROPERTY:** The basic institution underlying the existence of a market in a capitalistic economy is private control of property. With social sanction an individual holds, uses, and enjoys property rights not only in consumption goods but also in production goods. Consumption goods such as clothing and food are obviously the property of the individual consuming them. This relationship between a person and his legally owned goods was extended to include not only the things which a person could consume but also the goods which helped to produce the consumable articles. Thus, a person might possess private property rights not only in food but also in the land upon which the food was produced. The feudal idea of individual ownership of the product, but group ownership of the land, had been abandoned. The individual ownership of all property had replaced it. These private



property rights conveyed to the individuals possessing them not only the right to use the articles but also the right to dispose of them, whether horses or houses, whether food or farms. To dispose of property involves the transfer of the rights from one individual to another. This is accomplished by means of a sale and it is at this point that the market comes into the picture. During the medieval period, when the mass of the people had but little personal property, and no private property in productive goods such as land, markets were relatively unimportant in the socio-economic organization. With the decline of the feudal system individuals acquired property in a wider variety of things. Property conferred the right to use and to dispose of wealth in any way not specifically forbidden by law. A man's house, his farm, his ship, his tools and implements, his shop or business were his to do with practically as he pleased. As commercial capitalism developed, markets also developed and played an increasingly important role. Continually widening spheres of human activity were brought within the boundaries of the system of private property and the use of that property for private gain.

2. THE PROFIT MOTIVE: As early capitalism emerged, individuals were driven to exert themselves in economic activities not because of a customary obligation imposed upon all men of a given status, nor because of a command from a slavemaster, but because their livelihood depended upon their own efforts. The market offered opportunities for gain through the sale of merchandise or other property. It also offered profit opportunities to traders who were clever at the exchange of merchandise to their own advantage. As the Christian concept of just price died and the medieval craft-gild regulations disappeared, the operation of private business enterprises for profit became much more general. The "otherworldly" atmosphere of the town and manor become less noticeable as the mercenary techniques of the market place began to take the center of the stage. The desirability of salvation in a future world seemed less attrac-

tive as the more immediate pleasures of this world became more accessible to a larger number of persons. More and more attention was given by an ever-increasing number of persons to the acquisition of money. It became the key required to unlock the channels by which men could rise from one social rank to another. Personal gain became the central driving force in a new kind of society, where social status was less dependent upon birth and custom and more dependent upon the possession of wealth.

3. **FREEDOM OF ENTERPRISE:** As the number of private business ventures increased, more entrepreneurs succeeded in throwing off the restrictions that had hampered enterprise and dictated the forms of feudal economic activity. Profit-motivated individuals established and operated an increasing number and variety of enterprises. The individual who wished to make his livelihood in business was at liberty to enter almost any field he might choose. There were a few exceptions, such as the state monopoly on the business of making coins to serve as a medium of exchange. Once having selected a business the new enterpriser was free to determine the policies and methods of operation. He, like the captain of a ship, was in full charge. He could determine the location of the establishment, the amount and kind of machinery to be used, the number of workers to be employed, the hours and conditions of their labor, and many other matters. He was restricted, however, by the necessity of operating within the limits set by the impersonal market. In the purchase of raw materials he had to pay the same price as did the other businessmen with whom he competed. He found it necessary to pay the going rate of wages to his workers. He was forced to sell his product in a market over which he had no control. These were not limitations imposed by a gild nor regulations enforced by an unsympathetic state: they were simply the forces of an impersonal and free market.

There was freedom of enterprise only in the sense that businessmen were free to enter any field and to direct the

energies of men and machines within the confines of their plants. It is important to note that practically all the ventures were small and that the great majority of them were owned by a single proprietor or by a very small group of men united into a partnership. Since there were numerous enterprisers in each field, no one of them could dominate the market. Although there were, of course, differences in the size of these individual business units the difference between the largest and the smallest was not sufficiently great to destroy a rough equality in the market. The position of the modern farmer is illustrative of this situation. The size of farms varies today by several hundred per cent, but in spite of this variation in size no single farmer is sufficiently important to dominate the market or even to exert any significant influence upon any other farmer because of his policies or his operations. Each one is a separate and individual entity. During the early period of capitalism, economic society was made up of many such small units in the same way that physical matter is composed of many small atoms. It is for this reason that the conditions prevailing during early capitalism are frequently described as being atomistic.

4. **INDIVIDUAL INITIATIVE:** In such an atomistic society, where each independent business unit was motivated by the desire for material gain, the maintenance of business efficiency and the introduction of technical improvements could be left to the working of the automatic economic process. Each enterpriser, in attempting to gain a competitive advantage over his fellow businessmen, necessarily sought means for increasing the efficiency of his operations and thus reducing his costs. In the free and active competition between private enterprisers it was frequently true that those who had the most initiative, those who were most efficient, or those who were most clever, won the largest rewards. This fostered the belief that the very possession of wealth was, of itself, evidence of the possessor's

fitness to own. Those who did not possess much property, those who had not made a success of the business game were regarded, frequently with good reason, as negligent, lazy, or incompetent. Freedom of enterprise for individuals with initiative was a reality. There was little to prevent any thrifty and industrious individual from setting up a business in almost any field. If the new enterpriser was more effective in his business methods than the older ones he might expect to win some of their customers by selling a better product at the same price or by selling an equally good product at a lower price. The property which he might accumulate out of the profits of his successful business would be a richly deserved reward. On the other hand, if the new enterpriser conducted his business with less efficiency than the older firms he would soon find himself bankrupt and would deserve little sympathy in his sad plight.

5. *LAISSEZ FAIRE*: In every society, there must be some means for regulating the amount, kind, and price of goods produced. If each individual was completely self-sufficient these problems would shrink to an irreducible minimum and could easily be solved by the day-to-day decisions of the persons involved. In feudalism, custom, Christian concepts, and guild regulations played a dominant part in the solution of such problems. But in nascent capitalism a new technique was developed. The strangle hold of custom upon economic life had been broken. By the middle of the eighteenth century the bourgeoisie had arisen to challenge the old system of regulation. The philosophy of the new order was ably expressed in 1776 by Adam Smith. He contended that each individual was most competent to determine his own interests and to act in accord with them. This led with apparent logic to the conclusion that, by permitting each individual to maximize his own welfare, the maximum welfare of the total group would automatically be achieved. The freedom from governmental regulation required to

achieve this goal was characterized by the French phrase, *laissez faire*, which means, when translated freely, "to let alone."

The *market* was the central feature of *laissez-faire* economy. It became the focal point for the competition between sellers, the competition between buyers, and the competition between buyers and sellers. In explaining the complex interrelationships of a market-centered economy the theorists made many assumptions. Among the principal assumptions were the following: (1) individuals act in terms of their own self-interest and are motivated by the desire for gain; (2) competitors in the market are unrestricted and more or less equal in bargaining power; (3) prices will automatically adjust to changes in the supply of and demand for articles on a free market. Under these circumstances the competition between sellers and buyers resulted in a careful balance and produced an extremely sensitive and flexible system of prices. This freely determined system of market prices took the place of the regulatory activities of the medieval guilds and of the later mercantilistic state and acted as an automatic regulator of economic activity.

It regulated the total quantity of goods to be produced. When prices and profits were high in one field of business activity, alert businessmen were attracted to it in their desire to make the largest possible profit. As their products began to come onto the market the sensitive system of flexible prices was affected. If the demand remained the same, the larger supply drove prices down. The lower price reduced profits and thus discouraged additional businessmen from entering the field. Thus the price system, so long as it remained sensitive, controlled both the kind and the amount of goods produced. Buyers offered better prices for the goods they wanted but offered less, or nothing at all, for the kinds they did not want. The higher prices offered for the kinds of goods desired stimulated businessmen, seeking their own profit, to make and offer for sale the kinds of goods buyers were demanding. Those offering the kinds

of goods not wanted found it difficult or impossible to locate buyers and were forced to go out of business or to make the goods which buyers wanted. The regulation of the amount of goods made and offered for sale was equally automatic. When less was produced than buyers were willing to purchase at a price, active competition between buyers to get the goods forced the market price to rise. When too large a quantity was produced the price was forced down by the competition of sellers to dispose of their goods. The higher price attracted additional sellers; the lower price forced some producers out of business.

In the same way a system of free competition and flexible prices allocated the resources of the group to the most remunerative uses. The prices offered for land, labor, and capital by the various productive enterprises were not all the same. Those producers who were meeting the needs of buyers could, if necessary, offer higher prices for raw materials and higher wages to workers than businesses which were less effective in meeting buyers' wants. Thus, in the early capitalistic society, the myriad adjustments between all the constituent parts of the economic system were made through the flexible price system operating through the mechanism of the free market. Market price represented a balance between supply and demand. Whenever any price got out of line automatic pressures immediately developed and operated to bring it back. Under the early *laissez-faire* capitalism the millions of inter-relationships between tens of thousands of producers and the hundreds of thousands of buyers were left to the automatic operation of an impersonal mechanism.

## B. METAMORPHOSIS

The year 1776 brought forth Adam Smith's great book, "The Wealth of Nations," which described the principles upon which early capitalism functioned. Before the ink was dry on the paper, changes were under way which were destined to alter the nature of the economic order and to

affect its functioning. These changes were a result of the new technology. Newcomen's steam engine was already on the market and the epoch-making improvements made by James Watt were rapidly being introduced. The application of steam power to machinery was a basic change in the operational techniques of production. Although the consequences of the new technology were not immediately apparent they were extremely significant. In the textile industry new and improved methods were rapidly introduced. In iron production old techniques were replaced by new ones. Transportation was revolutionized. Many other industries, from coal mining to ceramics, underwent fundamental alterations.

The new technology produced innumerable social and economic changes. A few were inherent in the methods and appeared wherever the new technology was applied. The first of these was an increase in the volume of production due to improved technical efficiency. The second was a shift of productive activities from the small shop to the factory. It was quite impracticable and unprofitable to install steam engines in small workshops. The third appeared later as a consequence of the shift to the factory and the increasing volume of production. This was an increase in the size of the business unit and a consequent decrease in the relative number of establishments. It was necessary to assemble many workers in one place in order to use effectively the new engines and the new machines. These workers were brought under the direction of a manager or foreman. No longer was society composed of small independent businesses each employing a few workers and producing a small quantity of goods. Small shops were replaced by great factories in which many laborers worked for wages and produced a product which belonged, not to them, but to the owner of the factory.

It is easy to see that the atomistic nature of economic society was undergoing alterations of a fundamental nature as a result of the technological changes which had been

introduced and which were still going on. The thousand workers in a factory, for example, were related to one another in a fashion determined by the technical requirements of the machinery utilized in the plant. When a worker entered a factory he gave up his control over his own labor. Someone else coordinated his labor with that of the other workmen and with the mechanical equipment in the factory. Administration appeared and underwent a rapid development as the coordinating agency, although the market still coordinated inter-factory relationships. Even here the increasing size of the productive units gave one concern, or a few large concerns, the ability to adopt policies which affected the market price to their own advantage. Whenever one or a small group of units acting together could partially control the market price, then the market ceased to be an impersonal and automatic regulator of the relationships within the economic system.

The difference between an atomistic system composed of small producing units and the factory system may be illustrated in the production of nails. In place of a factory employing 500 workers to tend machinery for the production of nails, imagine 500 small blacksmith shops each of which produced only a small volume of goods by hand methods. In none of the 500 home workshops were more than a few workers employed. Relationships between owner and laborer were direct and personal. The problems of coordination were simple and the need for "administration" was almost entirely lacking. The methods of production were simple and clearly understood by all workers. Problems of coordinating workers with machinery were absent. There were no difficult decisions such as those concerning routing of work and staggering of labor shifts to require administrative ability.

During the last half of the nineteenth century the substitution of centralized administrative controls for the old buying and selling of many small enterprisers went on with accelerated pace, until by the opening of the twentieth



century our economic system had become predominantly an aggregate of controlled rather than competitively related units. The advance of technology had destroyed the market-controlled, highly competitive system. Efficient technology could only be used in vast plants which were not built until a large percentage of the total product could be produced by a single firm. The control of supply became essential to the maintenance of profit. The relatively higher cost of smaller and less efficient plants made the small producer unable to compete. Coordination of economic activity through administration rather than through market trading was the basic feature of the new industrial system. Business executives and technicians became the key figures in the new economy. The executive mobilized the capital of millions of small investors and harnessed workers, technicians, and machines to the needs of profit through the financial device of the corporation.

### C. THE CORPORATION

The trend away from the free competitive regulation of an atomistic society, which began with the technical changes of the Industrial Revolution and moved forward with the factory system, was brought to its modern climax by the development of a new form of business organization—the corporation. This new method of conducting business made it possible to increase greatly the size of the business unit and thus to expand the sphere within which economic processes and relationships were regulated by administrative decisions rather than by competition and by flexible market prices.

1. **SIGNIFICANT FEATURES:** As is well known, the corporation is controlled by a vote of its stockholders. Each stockholder can cast as many votes as the number of shares of voting stock that he owns: ten shares of stock, ten votes; ten thousand shares of stock, ten thousand votes. The corporation secures its funds by the sale of stock and other securities. Since an investor can buy any amount of stock

he wishes from one share to many thousands he can invest almost any sum from a few dollars to hundreds of thousands in the venture. Furthermore, in most corporations the principal of unlimited liability, which applied to partnerships, has been modified so that the investor's liability of loss is limited to the actual amount of his investment. When a partnership failed, each partner was liable for the entire amount of its debts. A partner who had invested only \$1,000 might lose it and find it necessary to pay an additional \$10,000 to settle the partnership's debts. In the corporation an investor may lose what he has paid for his stock but he is liable for nothing more. Because of this limited liability and by means of widespread sale of stock to large and small investors the corporations have found it possible to accumulate vast sums of money with which to do business.

The picture is further complicated by the fact that one corporation may, and often does, buy and hold stock in another corporation. Sometimes the principal function performed by a corporation is the holding of stock in other corporations instead of the production of goods. Such an organization is called a holding company. By means of this device scores of factories and even hundreds of corporations may be united under one management. Thus the holding company carries on the trend noted in the earlier factory system. It widens the sphere within which administrative decisions, instead of competitive practices, regulate economic relationships.

2. EFFECTS: Many great corporations today employ hundreds of thousands of workers, gather their funds from many thousands of large and small savers, and make decisions affecting a total organization worth hundreds of millions of dollars. It is easy to visualize the degree to which the new technology and the corporate form of organization have led us to depart from an atomistic, competitively controlled society if we try to picture the work of the United States Steel Corporation as being done in thousands of little

independent plants each making a few tons of steel each year. Likewise, the technological developments in the methods of communication have made it necessary for the telephone equipment of the country to be concentrated almost entirely in the hands of one organization and co-ordinated through its offices. One hundred thousand separate and competing telephone companies would produce unthinkable confusion. The present system of operating companies which provides the entire nation with phone service heads up ultimately into one central holding company. No one can contend that the rates charged telephone users throughout the nation are either flexible or competitively determined.

In many such utilities it has been frankly recognized that the old automatic system of regulation has broken down under the excessive strains placed upon it by the new technology and the new business forms. A different system of regulation by public authority has been established for the utilities in order to impose some social restraint upon the decisions reached by the monopolistic corporations which make and control policy. Competition has been almost entirely abandoned as a means of regulating the businesses providing transportation and communication service. The provision of water, gas, and electricity also comes under the new forms of regulation.

In spite of the growing amount of public regulation, there are still many fields of business activity in which enterprise is not subject to the regulatory dictates of some governmental commission. In these fields also the influence of competition as a regulatory device is waning as the corporation increases in size and power. It is obvious that those who are within a corporation are related to it and to each other in accordance with the administrative policies of the organization, not by unregulated competition in a free market. In 1929 factories employing more than 1,000 persons controlled the labor of about 25 per cent of the total number of industrially employed workers of the United States.

About 70 per cent worked in factories where 100 or more were employed. It would be safe to say that approximately half of the gainfully employed population of the country is to be found in industries where there has been sufficient concentration of control to make administrative decision, rather than the free competitive market, the controlling factor in determining the relationship of the workers to the economic system and to each other. Agriculture constitutes the principal exception. The professions, the service trades, and retail merchandising are other fields in which the older atomistic relationships continue to prevail to some extent.

Many people who are living in the midst of these changes fail to observe them and do not realize what a revolutionary effect the growth of the corporate form of organization is having upon property relationships and business practices. For example, the old personal relationship between an individual and his bit of privately owned property is gradually being replaced by the impersonal control of a corporation whose policies are dominated by a strong minority group. There are more than 300,000 corporations in the United States. Out of this huge number take simply the 200 largest ones. These are giant organizations in which the number of owners (stockholders) is so great that most of them do not take any active part in the control or operation of the organization. These stockholders are located all over the United States. When they receive notice of a stockholders' meeting they have three alternatives. They may attend the meeting, which usually involves an unwarranted expenditure of time and money. They may ignore the notice and meeting. Finally they may, and usually do, sign the proxy conveniently enclosed by the management. This gives the named person, usually a managing official, the power to cast the votes as he pleases. If the stockholder from Seattle does not send in a proxy for the meeting in New York the men in control will not be inconvenienced since they need only a majority of the votes cast to retain their control. If the Seattle stockholder does send in a proxy it will only

add more votes to those already controlled by the men running the corporation and thus will in no way inconvenience them. In a few cases an actual fight for the control of a corporation does develop between two powerful interests, each of which actively seeks the proxies of the hundreds of thousands of forgotten stockholders. These cases, however, are so rare that they actually provide news copy for the front pages of our newspapers. In most large corporations the investor surrenders control of his money in the same way that the laborer surrenders control of his activity when he enters the plant.

The two hundred largest corporations constitute less than 1 per cent of the total number of corporations but they control more than half of all the corporate wealth in the United States, omitting financial institutions. No realistic analysis of the system of industrial capitalism as it now operates could fail to take note of the influence of these gigantic corporations, a number of which possess assets of more than \$1,000,000,000 each. Administrative decisions not only direct the dollars of inactive owners and control the activity and lives of hundreds of thousands of employees, but also frequently exert a dominant influence upon the market.

3. SOCIAL SIGNIFICANCE: Let us examine the difference between administratively controlled prices as set by the officials of corporations and competitively determined prices as established upon a free market through a balance of supply and demand. First, what were the practices and circumstances surrounding price determination under conditions of atomistic competition? No seller had a sufficient quantity of goods for sale to be able to affect the market. No buyer purchased in sufficient quantities to be able to affect the market. When the amount of articles offered for sale was relatively small, compared to the amount buyers wished to purchase, competition between buyers for the available goods forced them to raise their offers. If, on the other hand, there were relatively few buyers compared to the amount of

goods offered for sale then competition among sellers to dispose of their goods would force them to reduce their asked prices. Prices were flexible, moving up or down in response to market conditions. In some markets these conditions still exist today. For example, there are thousands of livestock raisers all over the country. When Joseph Zilch ships his hogs or cattle to market he knows several things. He knows that his shipment is so small that he cannot possibly hope to control the market price. He knows that he cannot set the price on his animals. He knows that any number of animals he sends to market will all be purchased but he does not know and cannot dictate the price they will bring. This price will be determined by market conditions at the time his animals are sold. His only hope of influencing the amount of money realized through the sale of his livestock is by the control of this time factor. He can attempt to judge when the market conditions are likely to be the most favorable. If after waiting as long as possible market conditions are still unfavorable he has no alternative. He must sell for lower prices and receive smaller cash returns for his goods. As the price falls lower and lower the least efficient livestock raisers (those with the highest costs) find that they cannot meet expenses. They go out of business or are forced into bankruptcy. This reduces the number of producers and thus decreases the number of animals reaching the market. The shrinkage of supply tends to halt or even reverse the downward trend of prices. Thus, flexible prices reflect market conditions and act as an automatic regulator.

The situation is quite different in the great corporation. By its very size it can exert considerable influence upon the market price of the commodity. It is common practice for gasoline producers to follow the price policies of the Standard Oil Company. For years the United States Steel Company exerted the dominant influence in the determination of the price of steel. Can anyone believe that the General Motors Corporation has the same relationship to the market for automobiles that Joseph Zilch has to the market

for livestock? When more than three-fourths of all American automobiles are manufactured and sold by three corporations—Ford, General Motors, and Chrysler—the price policies adopted by any one of them is bound to exert considerable influence upon the market.

There is a second way in which these auto companies are quite unlike the small livestock raiser. They do not ship their cars to market and then wait to see what buyers will offer for them. Before a single car is offered for the inspection of buyers in any dealer's showroom the price is determined. The balance of supply and demand in a free competitive market has practically nothing to do with it. Instead, officials in the offices of the corporation reach a decision concerning the price at which they will offer their new cars. They consider the probable volume of sales at various prices. They consider their costs. They consider the probable policy of other giant corporations in the field. They consider all the factors which they think are important and then they decide upon the price which is most suitable in view of all the circumstances. The prices of all other models of their line of cars are then determined in relation to the price of the basic model and the completed price list is sent out to their dealers. After dealers have been supplied with display models and demonstrators the corporate officials wait anxiously to see how fast orders will come in. Joseph Zilch, the livestock raiser, knew how many cattle he had to sell but he did not know what he would get for each one. The automobile manufacturer knows what he will get for each car but he does not know how many he will sell. Under the conditions prevailing in the modern corporation prices are administratively determined. The volume of production which will be possible at any predetermined price can only be estimated in advance. As orders are placed and as goods are sold the amount of production in the factory can be increased or decreased to correlate with the volume of sales at the predetermined price. Price rigidity is necessarily accompanied by fluctuating industrial activity.

In a competitive atomistic society a decline in the amount of buying, relative to the volume of goods being offered for sale, results in a decline in the prices realized on the market. The reduced price attracts additional buyers and a balance is restored. When prices are administratively controlled this is by no means certain to happen. When the officers of a corporation are faced with charts showing a shrinkage in sales they have several courses of action open to them. First, they may decide upon a reduction in price in the hope that additional buyers will be attracted. They are unlikely to adopt this course of action for several reasons. The price reduction might be matched or exceeded by others in the field, thus starting a price war in which all sellers would receive less for their goods but none would sell any more articles than before. The officers are familiar with their production costs. They know that a large amount of those costs are fixed overhead charges which cannot be easily reduced. When sales decline these fixed costs must be distributed among fewer products, with the result that each product costs more. These two factors alone—the danger of a price war and the increasing per-unit costs—are adequate reason for not deciding to reduce market price.

The second course of action open to them is an increase in advertising with the hope of attracting more buyers. This is a tried and tested technique and, as such, appears attractive. Corporate officials may be somewhat hesitant about adopting it owing to the fact that increased advertising may add to the per-unit cost of the product. They may also fear a competitive advertising war. However, an increase in advertising is much more likely than a reduction in price.

The third alternative is an increase in price. Since the motive of business is the making of profits it is quite natural for the business executives who can control price to wish to control it in such a way that a profit will be made on each sale. Faced with a smaller volume of business and increasing costs what could be more natural than a



desire to raise the price of each unit sold to cover the higher per unit costs? For example, the railroads found their volume of freight shipments decreasing owing to the depression and the competition of trucks. They were not at all sure that a reduction in freight rates would produce an adequate increase in the volume of business handled since truckers might reduce rates proportionately and retain the same share of the freight business. They, therefore, petitioned the Interstate Commerce Commission to permit them to increase their freight rates in order to meet more adequately their rising per unit costs. Shippers forced to use railroads could not escape the higher costs. As in this instance, a decline in the volume of sales may, under administratively determined prices, actually result in an increase in the market price rather than a decrease in the market price as it would under a self-regulating competitive system with flexible market prices. In actuality very few prices really rise under these circumstances. This may be due to any one of several factors. Perhaps the field is not sufficiently monopolized. The corporation may still fear the loss of sales to competitors who might not follow its lead in raising prices. The executives may have a vague, but well-justified, fear that a price increase would produce a further decline in the number of buyers.

No one of these three alternatives may present a clear-cut solution of the problem. Executives, therefore, frequently decide to maintain established prices with such increases in the appropriation for advertising as the budget seems to warrant. Administrative determination thus tends to introduce considerable rigidity instead of easy flexibility into the price system, which stands at the very heart of capitalism. The system has lost the adaptability of youth. Is it afflicted with hardening of the arteries and threatened with the creeping paralysis of approaching senility?

## V. MODERN PROBLEMS

Every culture has faced a set of problems peculiar to itself. It is not surprising, therefore, that the present

culture based upon private property, the profit motive, and power technology should encounter its own particular set of baffling problems. Some of these are so outstanding that they deserve special mention.

### A. UNEMPLOYMENT

Prior to the Industrial Revolution the problem of unemployment was practically non-existent. On the English feudal manor, for example, every individual from the cottar to the lord inherited his position and had his special duties to perform. It would have been impossible to conceive of an individual with no status in the group and no work to do. In the early days of the United States, when land was entirely free or relatively easy to get, any industrious individual could make a livelihood by employing himself upon the land. As capitalistic industry permeated the American scene, partially equipped with the technology already developed in England during the Industrial Revolution, agriculturalism rapidly lost its position as the dominant characteristic of the American economy. The frontier was pushed westward from the Atlantic. Then a second frontier was formed in California and pushed eastward from the Pacific until they met and both disappeared in the Rocky Mountains. Discontented Easterners and underprivileged workmen could no longer become their own bosses by moving to the unclaimed West. The vast western domain of America was transformed into private property where a man could not work or earn a livelihood save by permission of some landowner. In the industrial sections the factory system and the continued march of technology brought more and more men to the status of employees under bosses who had secured private ownership of the means of production. The advent of the huge industrial corporation and the increase of farm tenantry through farm-mortgage foreclosures by giant financial corporations completes the picture. The average individual today can secure employment and earn a livelihood only if he can secure permission to work from one of the corporations or individuals holding

the legal right to use and control the productive facilities of the country. This is the meaning of the phrase "seeking a job" or "looking for work." The man who does not own the factors of production seeks one who does and asks permission to work so that a product may be produced. In some years workers have little difficulty in finding employment but in other years millions of workers are unable to find any enterprise in which they are permitted to apply their labor.

The change from flexible price adjustments in an atomistic economy to rigid administrative price decisions dominated by the corporate form of business has intensified this unemployment problem. When a corporation finds that its volume of sales is declining it usually maintains its prices and reduces its volume of production. This of course necessitates laying off some workers. They, as a result of their unemployment, have no incomes and must reduce their buying of commodities made by many other corporations. These in turn reduce their production schedules and lay off men, thus increasing unemployment and reducing the amount of purchasing power in the hands of consumers still further. This all leads to a continually downward spiral in which shrinking sales, curtailed production, increasing unemployment, and vanishing purchasing power chase each other in a dizzy circle. In the last depression this vicious circle continued until production had almost ceased in some industries. The steel and automobile industries, for example, lost 80 per cent of their previous volume of production. Furnaces were cold and factories stood idle while men slept on park benches for the lack of the wages which would have enabled them to pay their rent. No accurate figures on the amount of unemployment were kept but some experts estimated the number to be between 12,000,000 and 15,000,000 out of the 45,000,000 normally employed. Those few families in which some member was not touched by the withering blight of unemployment lived in constant fear that the

morrow would bring the dreaded layoff notice in a pay envelop already shrunken beyond recognition.

## B. DISTRIBUTION OF WEALTH

In modern capitalism a few individuals and certain corporations have special privileges which enable them to control vast amounts of wealth. It has already been noted that the distribution of wealth among the 300,000 corporations of the country is very unequal, with less than 1 per cent of them owing more than 50 per cent of their combined wealth. In the case of individual ownership of wealth the same disparity appears. Private property rights in the natural resources and productive facilities of the country have made it possible for certain individuals to enjoy special privileges productive of great wealth. Vast private fortunes have been built on real estate, railroading, aluminum, oil, and other commodities. The laws of inheritance and bequest permit special privileges and advantages to be passed on from one generation to another. It can hardly be maintained that little, undernourished John Doe, born in the overcrowded tenements of New York, Chicago, or San Francisco, who is inadequately clothed and poorly educated in schools that are overcrowded and understaffed, has the same chance that Edsel Ford, for example, enjoys. Equality of opportunity became a myth and lost all contact with reality long before the American frontier disappeared forever. The race of life is one in which some of the runners start near the finish line and others weighted down with handicaps limp down the track from far behind the starting gun. It is no mere accident that some individuals control hundreds of millions of dollars' worth of property while others, after a lifetime of toil in the cotton fields of the South or the factories of the North, at last find their permanent rest in a pauper's grave.

Wealth is the basis of the American class structure. In this country, where a hereditary titled nobility has never existed, class distinctions are based upon possessions and

result in an aristocracy of wealth. Like the older aristocracy of blood the new aristocracy of wealth looks with disdain upon those who have but recently joined its ranks. The newly rich families cannot command the same position and status that is accorded other families with wealth of long standing.

Economic inequality in the United States is most evident in the great disparity between large and small incomes. The amount of purchasing power which a person receives in a year limits his scale of living. It constitutes the basis of all spending and saving and thus determines the amount and kinds of goods produced. A person receives income either as a payment for manual or mental efforts in production, or as a payment for the use of his property in production. Personal income is, therefore, a result of working or owning or a combination of the two. The highest incomes are derived almost wholly from property rights while the lowest incomes are entirely the result of labor. Of course, many wealthy people with vast income-producing property devote their abilities and time to its management and sometimes receive a salary or bonus in return. Most property income, however, is received in the form of rents, interest, and dividends.

An interesting difference between property and labor incomes is their relation to ability and effort. Property incomes are largely independent of the ability or efforts of the recipient. The owner of a large block of utility bonds receives his interest whether he is playing on the sands of the Riviera, striving in his office, or languishing in a hospital. But the recipient of income from labor finds that it varies directly with his activity. If he takes a vacation or suffers a long illness his income ceases when his labor stops. The receipt of labor income depends not only upon his ability to perform a service but also upon his ability to find an employer who will buy his services. Those who own or control property are the employers whom laborers

must seek. There is some truth in the saying that "The poor work themselves, the rich work others."

Of the 130,000,000 inhabitants in the United States only about one-third, or between 40,000,000 and 45,000,000 individuals, receive a monetary income directly. All individuals, of course, receive a real income in the form of food, clothing, and shelter, but not necessarily as direct participants in the productive system. Many individual income receivers are the heads of families and thus have one or more persons dependent upon them. In fact, 60 per cent of our population consists of children, housewives, or aged who receive their livelihood indirectly as the dependents of some direct receiver of cash income. Of course, some direct receivers of individual cash incomes are not heads of families and have no dependents. In some families there are two or more direct cash-income receivers. These facts make it difficult to correlate individual incomes with family incomes.

The living unit in our society, as in all past cultures, is the family rather than the individual. The family is, therefore, the proper unit to use in describing the distribution of income. The internal apportionment of family income among the members of the family group makes the family one of the important factors affecting the receipt of real income and cash income by individual persons. The size of the family income determines its standard of living. The way the family income is spent, and thereby directed through the various channels of trade and investment, determines the way in which the productive energies of society will be spent. The way family incomes are spent is affected, in turn, by the size of the income. Let us, therefore, examine the incomes received by various groups of families.

In 1929 there were about 27,500,000 families in the United States. These received an aggregate income of approximately \$77,000,000,000 or \$2,800 per family. How-

ever, this is merely a statistical average and quite meaningless. It is much more significant to know how many families fell below and above this average and still more significant to know how far above and how far below they were. The chart below shows the distribution of family incomes in 1929. Note the wide disparity between the incomes of the 6,000,000 families at the bottom and the 600,000 families at the top. Observe also the concentration of the vast majority of families in a narrow income range.

FAMILY INCOME DISTRIBUTION IN THE UNITED STATES  
IN 1929

<i>Income</i>	<i>Number of families</i>	<i>Income</i>	<i>Per cent of families</i>	<i>Per cent of income</i>
0- 1,000	6,000,000	\$ 3,500,000,000	21.5	4.5
1,000- 2,000	10,500,000	15,500,000,000	37.7	20.0
2,000- 3,000	5,000,000	12,500,000,000	19.0	16.0
3,000- 5,000	3,600,000	14,000,000,000	13.5	17.5
5,000-10,000	1,300,000	10,800,000,000	6.0	14.0
Over 10,000	600,000	21,500,000,000	2.3	28.0
Total.....	27,300,000	\$77,800,000,000	100.0	100.0

The social significance of inequality can be appreciated more readily when we see the relation of these figures to human needs. Many studies have been made of the amount of income required to assure a family of the basic necessities of life. The amount, of course, varies with the place and the price level but most estimates range from \$1,500 to \$2,500. If \$2,000 be taken as a suitable figure for a typical family, it is evident that in the prosperous year of 1929 more than 16,000,000 American families, or nearly 60 per cent of the total, were living below this standard. If \$3,000 be taken as the income required for comfort, that is, the amount required to supply health and decency from day to day, plus the minimum luxuries such as magazines, movies, vacations, and higher education, as well as provision for emergencies and old age, then it is evident that nearly 80 per cent of our population failed to achieve a

comfortable standard of living. But much more startling from the standpoint of inequality is the fact that the wealthiest 2.3 per cent of American families received more purchasing power than the poorest 60 per cent in the prosperous year of 1929. Such inequalities are but one evidence of what Professor Tawney calls "the sickness of an acquisitive society."

There has probably never been any great culture in which the wealth and income of the group was distributed equally among all its members. There probably never will be such a society. No competent student of the social sciences contends that there ought to be an equal distribution, since individuals have widely varying characteristics and unequal abilities. However, optimum distribution is, at present, merely a theoretical question. The more important and practical question is how much inequality society can endure. The maldistribution of income and wealth now existing in most of the capitalistic countries of the world is producing dangerously distressing social and economic consequences.

The invidious contrast between grinding poverty and great wealth produces social discontent which smolders beneath the surface and occasionally breaks out into the open flame of violence. The range of inequality in income has a very marked psychological effect upon the recipients of the smaller incomes. Animosities and conflicts would be much less violent in a society where the lowest income was \$2,000 and the largest \$10,000. In our society workers receiving \$500 or \$600 a year can see other individuals enjoying incomes, not two or three or five times as large as theirs, but from one to five thousand times as large. It is not surprising that their attitude toward such individuals is one of bitterness.

One of the economic consequences of the maldistribution of income is the way it effects spending. One who receives a few hundred or a few thousand dollars a year is certain to spend practically all of it for consumption goods. His



purchases include food, clothing, shelter, recreation, medical attention, and transportation. Thrifty individuals attempt to save, but years of effort produce only a small sum. The situation is quite different for an individual with an income of \$500,000 or \$1,000,000 a year. Even if recreation is practiced on a grand scale, with private golf courses and yachts, it is difficult to spend money for consumption goods year after year at the rate of over \$2,700 dollars *every day!* Sooner or later nearly all large-income receivers are forced to save and invest a large part of their incomes.

Most people set aside savings out of low and moderate incomes to provide for the emergencies of life (sickness, accident, and unemployment) and for old age, but the wealthy save out of their income surpluses to increase their property. This relation between income and saving is shown by the following facts. Of the \$15,000,000,000 saved by families and individuals in 1929 nearly \$12,000,000,000 or 80 per cent were accumulated by that 10 per cent of the population having incomes of over \$5,000. That savings increase more rapidly than income among the wealthy is evidenced by the fact that two-thirds of the \$15,000,000,000 saved was made by the 2 per cent of the population, with incomes above \$10,000 per year. Families with incomes of over \$50,000 per year saved an average of half their income while those with \$1,500 or less per year saved little or nothing. Some actually spent more than they received, making up the difference by borrowing or charity. To the extent that the wealthy and the moderately well-to-do divert their money from spending to saving or investing, they reduce the demand for consumers' goods. They divert a large part of their money from the purchase of consumption goods and spend it for the building of new factories, the opening of new coal mines, the financing of new businesses, and other investments in productive facilities. The savings may actually flow into the pockets of workers through wages while the new plants are being built but sooner or later this will stop and the finished

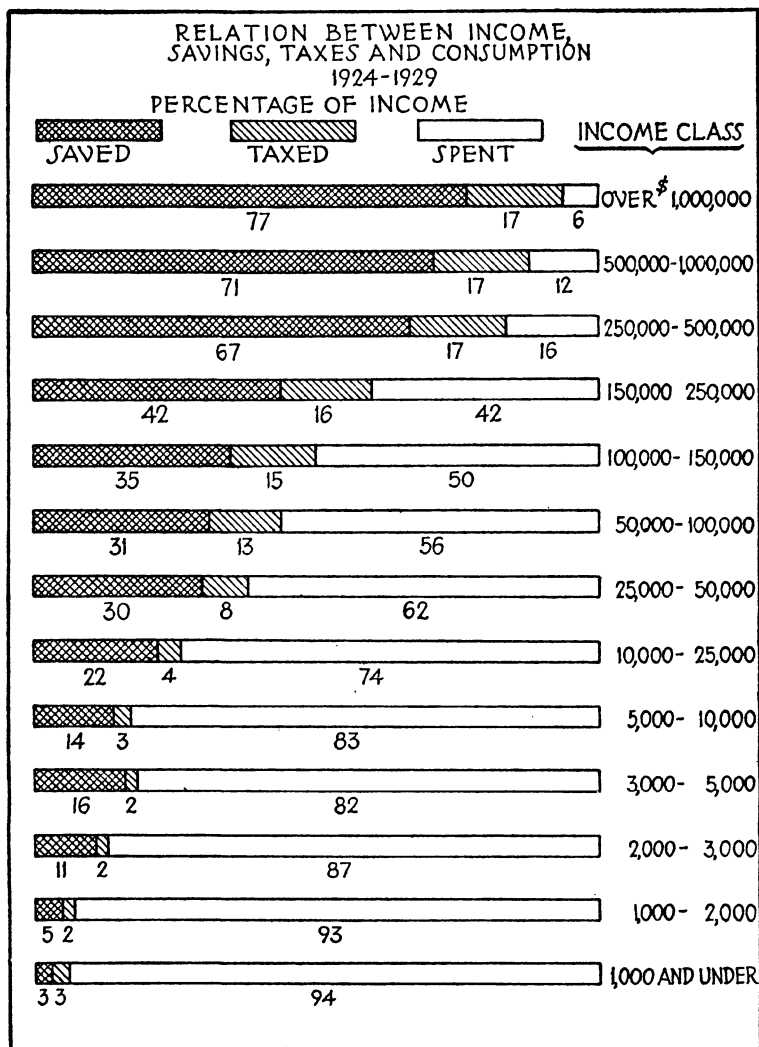


FIG. 12.—RELATION OF SAVINGS TO INCOME.

The effects of the maldistribution of wealth upon purchasing power is shown by this chart based upon a survey made by *Business Week* in 1929. Large savers augmented industrial capacity without increasing the demand for goods. The result was a depression. The situation pictured here has been somewhat corrected by a belated increase in income tax rates, especially in the higher brackets. A person who pays a tax of sixty percent on an income of a million or more per year, obviously is not deprived of any of the necessities or even luxuries of life. Such a tax merely reduces the flow of excessive income into the investment market and helps to correct the forces which threaten the very foundations of capitalism.

factories will begin to spew their products on a market already deficient in purchasing power. Thus the savings of the wealthy increase the productive capacity of the country at the same time that the same savings reduce the ability of the country to buy the consumption goods which the factories turn out.

We need not be surprised that underconsumption results when we remember that numerous giant corporations have joined the wealthy individuals in the process of saving. These amazing organizations systematically set aside a portion of their profits in accounts given such names as "reserves" or "surplus." Funds are thus withheld from individuals who might spend them for consumption goods. The corporation invests these funds in securities, uses them for the building of new mills and factories, or saves them for an emergency. The combination of administrative curtailment of production in a non-flexible price system with extensive saving by wealthy individuals and great corporate businesses goes far toward explaining why the roaring wheels of industry periodically slow down and sometimes halt to the accompanying cries of misery and anguish from workers and consumers. The dire social consequences of our "oversaving" are evident when we consider the fact that for several decades we have been unable to use our productive equipment fully. In prosperous years, such as 1928 and 1929, our industrial plants have been only 80 per cent in use. This means that many plants or parts of plants stood idle or were used only part of the time. The overhead charges, such as interest and rents, were paid out of the earnings made possible by the actively used industrial plants. In depression years our industrial plants have been from one-third to two-thirds idle while our population has suffered for the lack of the very things which they could produce.

Evidence that oversaving is largely the result of the maldistribution of income is found in the fact that in recent years investment has lagged behind saving. Until

recently economists assumed that savings would automatically be invested by bankers and other custodians of the capital fund. All savings were thus supposed to flow into the hands of workers in the building and capital goods industries and to augment the productiveness of industry en route. But savings are only used to build new plants when there are opportunities for profit. Businessmen do not build factories because people save but because people buy. Unless there is reasonable expectation of profit the new plants will not be built. As long as our population was increasing rapidly and we were engaged in extending our civilization into the hinterland, the savings made in America were inadequate to build all the factories, railroads, machinery, and farm equipment which could be used profitably. We, as a nation, borrowed from people in other countries as well as from our banks. But during the roaring twenties the amount of saving—individual and corporate—exceeded the investment opportunities. By 1926 the amount of saving exceeded the amount invested in capital (producers) goods by \$5,000,000,000. In 1929, of the \$15,000,000,000 saved, only \$5,000,000,000 found its way into the expansion of productive equipment. The balance went for the most part into the speculative stock market, where it contributed to wild inflation of existing security prices. An interesting example of how saving contributed to the ills of a depression occurred in 1932 when savings rose to the largest proportion of the national income in the history of the country. This was at the very time when our industrial system was all but paralyzed from lack of mass purchasing power.

Another economic consequence of the present distribution of income and wealth is the concentration of economic power. In modern society money and possessions give power to their owner. He who has money can command the services of others like a Caesar. He need only hire them and, in fear of losing their jobs to others, they will perform whatever tasks his slightest fancy may dictate.

Property gives its possessor great power over others. He who owns a factory has the legal right to use it, or not to use it, as he sees fit. If he believes that profits can be made he announces that the factory will operate. Workers crowd around the gate in the hope of employment. The owner of the factory decides which of them will be able to pay the landlord, the butcher, the grocer, and the insurance company. He can control the routine of their lives by telling them when to arise and come to work, when to eat, and when to quit work. He can dictate the kind of work they will do. He can determine their standard of living by deciding how much he will pay them.

Workers have shown an increasing disposition to match this power of ownership with the power of organized workingmen's groups. However, the great majority of American workingmen are still outside the movement toward unionization. The government has shown some inclination to curtail the power of ownership. Illustrations are provided by certain tax laws, maximum-hour laws, and minimum-wage laws. In spite of government regulation and worker opposition it still remains true that the possession of vast wealth and property conveys to the owner a staggering amount of economic power. By a simple decision to shut down a plant a single industrialist may condemn a thousand men to a hopeless search for non-existent jobs. His former employees may be turned out upon the street in the dead of winter with no provision for shelter and with no supply of food. The humane society prevents a similar treatment of his horses.

### C. SOCIAL SECURITY

The hazards which confront the working population today are quite different from those of several centuries ago. When men lived in their own huts and cultivated the land, the principal threat to their livelihood came from the failures of nature. A great drought could cause a crop failure and produce famine and starvation. A great flood

could sweep away crops, houses, and valuable property. A great pestilence could destroy livestock or men or both. A great war could upset the social and economic system and disrupt life over large areas. In modern times all these hazards still remain. War in particular, when mechanized by modern technology, probably represents a greater threat to economic and social security for the average man than ever before.

To the natural hazards of former times man has added others of his own creation. Ever since the days of the Industrial Revolution there has been a long procession of inventions. New engines, new machines, modern improvements have followed each other in rapid succession. As specialization increased, more and more tasks were reduced to the simple repetition of the same motions. A machine can easily be devised to perform a task which is simply repetitive. Whenever the initial and maintenance cost of a machine is less than the cost of labor to perform the same task the workers are dismissed and a machine replaces them. Workers who lose their jobs to machines are said to suffer from technological unemployment. Some displaced workers are absorbed in the industries which make and maintain the new equipment. Others find work in the service industries, which grow as the incomes of workers in well-organized or protected industries increase. But despite these offsetting factors the scrap heap of idle workers receives its share from the victims along the road of technological progress.

Those workers not directly threatened with technological unemployment are not much more secure in their jobs. Some of them work in industries that are seasonal, like coal mining, building, or canning. At certain periods of the year there is little, if any, work to do and those worker who are not needed are necessarily laid off. While thus temporarily unemployed "for a season" they have no incomes. It is here that the unemployed industrial worker differs from the farmer who finds work slack at certain

seasons. The farmer has shelter, food, and clothing for the entire year as a result of his labor no matter at what season it is performed. The industrial worker frequently receives only enough for a bare living while he works. When he does not work he receives nothing. This forces him to rely on private charity or government doles.

The threat of technological and seasonal unemployment is but trivial when compared with the threat of "depression" unemployment. At irregular but increasingly frequent intervals the whole productive system of industrial capitalism breaks down. The productive machine of the capitalistic world creaks, groans, and slows up. Men say, "It is a crisis." Then they say, "We are in the midst of a depression." Stock prices crash. Real estate values collapse. The stream of trade dries up. Market prices toboggan downward. Banks fail. Profits vanish. Popular morale is shaken and public confidence in basic institutions disappears. The business machine seems to be shattering itself upon some unseen obstacle. Unemployment increases at a staggering rate. Nothing seems safe; no one is secure. When at last the depression wears itself out, or is defeated by drastic governmental action, it leaves a trail of bankrupt businesses, shattered homes, and demoralized unemployables.

What can be done in the face of this threat? The business corporations of the country attempt to prepare for these emergencies by setting aside reserve funds out of their profits. As we have seen, they thus hasten the appearance of the emergency which they dread. When it arrives they frequently find that their reserves are in securities, or real estate, or banks which have been affected by the emergency in such a way that the reserve funds cannot be withdrawn in the form of cash. Individual workers also try to save in an effort to prepare for the feared catastrophe which brings the loss of job and income. However, due to the present distribution of income among the various classes of income receivers, the great majority of workers find that the support of a wife and family takes practically

their entire income and leaves little or nothing to be set aside. For the industrial worker the gaunt specter of economic insecurity is a constant companion. It is impossible to predict the month or the week when the pay envelop may contain a summons to join the growing army of the unemployed. Each worker lives in a constant state of dread and uncertainty with the threat of unemployment hanging over his head like the sword of Damocles.

There is still another problem confronting the industrial worker. Under the stimulus of modern technology industrial processes have been speeded up. Employers show an increasing preference for young men who can keep up with the new fast pace. The worker over fifty years of age is at a considerable disadvantage. In many industries the employers follow a definite policy of hiring only men who are under forty-five. Some industries, seeing that there are plenty of unemployed men from whom to choose, have already lowered their maximum hiring age to forty. Must the industrial worker, unable to save, look forward to an idle and useless old age in which he will be dependent either upon his children or upon society? Does "old age" begin at sixty, or at fifty, or at forty-five?

There is an increasing tendency on the part of workers, social scientists, and politicians to accept a new point of view with respect to economic insecurity. More and more persons are coming to recognize that individual action cannot be expected to meet adequately the problem of insecurity due to unemployment or old age. There is a growing belief that the technique of social insurance can be successfully applied to these distressing problems. Insurance is simply a technique for group action to meet risks which are common to large numbers of persons. For example, all those people who run the risk of having their homes destroyed by fire may unite and each contribute a small sum to a general fund from which to pay for the damages to the homes of all those persons whose homes are actually burned. In the same way, with the help and



supervision of the government, the entire social group may build up a fund with which to meet the risks of old age and unemployment. In modern society the principal aspects of economic insecurity are a result of our institutions and group behavior patterns. Only by group action can we hope to cope successfully with the results of our present form of social and economic organization.

## VI. FACTORS FOR CHANGE

Industrial capitalism has been a spectacular actor in the procession of cultures which march across the pages of history. It has brought many obvious benefits and many equally obvious problems. In spite of the repeated depressions which have afflicted capitalism, and in spite of its other serious shortcomings, no new cultural pattern has yet evolved. All opposition movements attack certain aspects of capitalism but fail to supply a complete new unified pattern. A new cultural pattern does not emerge with the first or even with advanced signs of decay in an existing culture. Instead, it evolves slowly, usually from a few nuclei which do not fit well into the existing cultural pattern. Factors tending to produce cultural change are present at all times. Two prevailing trends of cultural change are distinguishable at the present time. First, there is an attempt to regulate and control the present type of industrial capitalism through democratic political institutions. Second, there is an increasingly strong pressure in the direction of some form of collectivism.

### A. GOVERNMENTAL REGULATION

Every democratic government is subjected to pressures from various groups which frequently urge conflicting programs of action upon it. Business groups, for example, tend to favor high tariffs while consumers urge low tariffs. Debtors want inflation while creditors clamor for "sound money." In the face of many conflicting demands the

course of governmental action is difficult to predict and sometimes hard to understand. By the time the factory system in England was well established there arose demands for the governmental regulation of the hours of work and the conditions of employment in the factories. The English factory acts were the result. These, however, were not the first effort of the state to regulate economic activity nor were they the last.

In the United States unregulated competition among railroads produced many rate wars, which drove certain roads into bankruptcy. Bankruptcy was often followed by merger, with a boosting of rates to the limit the traffic would bear. On other occasions competition resulted in traffic pools and agreements which had the effect of raising rates and avoiding cutthroat price wars. Farmers and other shippers protested vigorously against what they called discriminatory and unjust rates. In order to protect the users of transportation service and at the same time prevent unnecessary railroad bankruptcies the government stepped in and began to regulate the railroads in 1878 under the Interstate Commerce Commission. Additional legislation such as the Hepburn Act of 1906, the Mann-Elkins Act of 1910, and the Transportation Act of 1920 has been added from time to time.

At a still earlier time the government found it necessary to regulate banking. The laxity of state banking laws had resulted in a period of "wildcat" banking which had undermined all confidence in bank-note issues. In 1863 the federal government began to bring order out of confusion with the National Banking Act. In 1865 a tax was imposed upon the issuance of bank notes by state banks and the troublesome notes disappeared from circulation. At the end of 1913 the Federal Reserve Act was passed, creating the Federal Reserve System. Banks are today subjected to periodic inspection and their activities are rigidly regulated. Even the savings of the majority of depositors are guaranteed by the government under the provisions of the Banking

Act of 1935, which also improved many parts of the Federal Reserve System.

Practically all public utilities, such as water companies, electric light plants, and gas companies, are under public service commissions, which regulate their rates and supervise their activities. The reason for the development of regulation in this field is not difficult to find. Most utilities by their very nature must be monopolies. Competition is not satisfactory. The customers of a monopoly cannot transfer their patronage to another company when they find prices too high. Their only alternative is to refrain from buying. This is difficult or impossible in the case of utilities. Water is a necessity and other utility products are practically as indispensable. Therefore, in order to protect the general public which must buy, regardless of price, the government inaugurated a system of regulation.

The regulatory activity of the government with respect to industry and labor has a long history, the details of which we need not recount here. Many efforts have been made to regulate the hours of labor and the conditions of work. The net result has undoubtedly been some improvement in the conditions under which productive activities are carried on. In the regulation of business, as distinguished from the regulation of wages and working conditions, certain highlights stand out. In 1890 the federal government became convinced that the maintenance of competitive conditions was being challenged by the development of monopolies. The Sherman Anti-trust Act of that year was an effort to curb the growth of these monopolies. This was followed with the Clayton Anti-trust Act in 1914. Although there have been a number of spectacular prosecutions under the anti-trust laws the trend toward the concentration of industrial power in fewer hands and larger organizations has not been halted or reversed. In fact under the National Industrial Recovery Act of 1933 there was some tendency to abandon anti-trust legislation in favor of other types of industrial regulation. Since that

act was declared unconstitutional by the Supreme Court there has been no well-defined policy but opposition to monopolies seems to be increasing.

In 1906 the Pure Food Act was passed. This was designed to prevent businessmen from gaining a competitive advantage over their rivals by reducing the quality of their food products and drugs at the expense of the public. The law is now antiquated and there is considerable agitation for a more adequate statute. In 1914 the Federal Trade Commission was charged with the responsibility of preventing unfair competitive practices and has done much to regulate the so-called competitive activities of private firms.

Perhaps the most extensive program of regulation ever to be initiated under any single administration was begun after President Franklin D. Roosevelt took office. The National Recovery Administration, the Agricultural Adjustment Administration, and the Securities and Exchange Commission were but three of the major regulatory efforts of his astounding administration. The most spectacular experiment in industrial regulation ever undertaken in the United States was made under the N. R. A. The climax of the present trend toward governmental regulation was reached in the program of crop control adopted under the A. A. A. in that most individualistic of all American occupations—agriculture. Without doubt the new Commission has curbed manipulators of listed securities and greatly increased the reliability and amount of information available to the small investor. Its activities have eliminated many of the practices which formerly produced unhealthy speculation in securities. The methods of raising capital by the public offering of securities have been regulated in the interest of sound business and social welfare.

Those who believe in the desirability of the capitalistic system but are aware of its inability to regulate itself for the attainment of the greatest social welfare, advocate an increased amount of governmental regulation. They believe

that by this means the present capitalistic system may be made to work tolerably well. They believe that a regulated form of industrial capitalism is infinitely preferable to any other type of politico-economic organization yet devised.

## B. COLLECTIVISM

The mild program of governmental regulation of business is regarded as entirely inadequate by a rather large group of persons who believe that some form of group action in the economic field is called for. With varying degrees of thoroughness they wish to substitute some other form of economic organization for the institutions of private property and freedom of enterprise which they conceive to be characteristic of industrial capitalism. Since these groups disagree among themselves with just as much violence as they display in their opposition to the present system it will be desirable to treat each one separately.

1. **FASCISM:** The newest and one of the most puzzling challenges which American capitalism has to face is Fascism. As yet it seems to be more of a technique for wielding national power than a consistent, unified, and definitive system of economic and political organization. Almost everything that can be said of Fascism must be said with specific reference to what has taken place in Italy and Germany, although it is possible that the recent developments may add other characteristics to the general concept of Fascism.

There are a number of points at which Fascism differs from the "American System." In the first place it discards any thought of natural rights. The citizen under the Fascist state is taught that he has many duties and that he must perform them. It is his privilege to serve the state. He exists for the state, not it for him. The individual and his interests must always be subordinated to the larger interests of the state. In the second place it abandons the principle of majority rule. It ridicules the idea that one can determine what is right, or even what is best for the group, by counting

noses. The determination of policy must not be left in the hands of the majority. It must be placed in the hands of those who are competent to determine the proper policy. This is consistent with the third difference. Fascists do not believe in the equality of men. They say that the idea that all men are born free and equal is just sheer nonsense. Fascist literature is filled with references to *the elite*. Leaders are regarded as gifted men with special abilities. However, these leaders in the Fascist state are selected by appointment from above not chosen by election from below.

One of the most striking differences between Fascism and the leading radical movements is that it does not believe in the class struggle. It bluntly refuses to accept any explanation of the social order which emphasizes the conflict of interests between labor and capital or between workers and employers. It is particularly violent, therefore, in its opposition to Communism, which is built upon the idea advanced by Karl Marx that the class struggle must inevitably and ultimately result in the victory of the workers.

The things for which Fascism does stand may be summarized under a number of headings. First it is decidedly and violently nationalistic. The idea of universal peace is secondary to the promotion of the national ambitions. The idea of international cooperation is useful only so long as it promotes the interests of the nation. Whenever the aims of the Fascist nation can be more effectively served by acting alone, even by making war, the idea of peaceful observance of treaties and international cooperation are as quickly discarded as an old cloak. Along with nationalism has gone a large measure of race consciousness. Mussolini, the leader of Italian Fascism, has re-inspired the people of Italy with a pride in their racial heritage. The glorious accomplishments of their forefathers have been held up to them as examples to be imitated. There is considerable reason to believe that an attempt is being made to establish a modern Roman Empire. A still more virulent form of

race consciousness has afflicted Germany with a violent outbreak of anti-Semitism. Those of Nordic racial stock have been praised and eulogized while those of other racial types, particularly Jewish, have been made to feel the social and economic disadvantage resulting from their unfortunate choice of parents.

Second, the Fascist state is totalitarian. Not only does it dominate the economic scene, it is all-embracing in the social relations of the group as well. It is concerned with science and art, family and religion. It is more than economic and social—it is “spiritual.” In “The Doctrine of Fascism” Mussolini says, “For the Fascist, all is comprised in the State and nothing spiritual or human exists—much less has any value—outside the State.” The state is thus regarded as both beautiful and noble. It represents the synthesis of the highest spiritual and cultural values of the group. It is also the most efficient agency for securing the realization of those values and goals which the *elite* leadership has decided to pursue.

Third, the Fascist state rests upon the use of force. Fascism invariably involves dictatorship supported by military force. It is a form of government which permits the maintenance of a modified form of capitalism by the use of force. Private property and the profit motive are retained although many of the privileges which are taken for granted in America are seriously restricted or destroyed entirely. Employers cannot close their plants in a “lockout” of their employees. Workers do not have the right to strike. Newspapers and publishers have no freedom of the press. Citizens have lost their right of assemblage and freedom of speech. The power of the state is used to control the economic and social life of the nation. Every Fascist state is a dictatorship—but not every dictatorship is a Fascist state.

Fourth, growing out of these two concepts, the totalitarian state and the dictatorial use of force, comes another idea: the unity of interest between labor and capital. For

the good of the group all subgroups and all individuals must work in harmony. Fascism stresses the importance of efficient production that the state may be strong, powerful, and wealthy and that its people may be well cared for. To permit a class struggle between capital and labor to cripple the efficiency of industry or to stop production entirely would be to the disadvantage of the employers, the laborers, and the state. Therefore, industry is so organized and the power of the state is so employed that no disruptive conflict is possible between the various groups involved in industrial production. The immediate control of production is in the hands of corporations composed of both employers and employees and under the supervision of the state.

Fifth is the corporate state. In Italy, where Fascism has reached its greatest development, the corporate state is appearing. In some ways this new modern state resembles the old gild system. Both include employers and workers. Both organizations perform legislative functions and regulate production. They both settle disputes between individuals and factions within their own organization. They both attempt to control wages, hours, working conditions, and prices. In the Italian corporate state the corporation has replaced older methods and has become the unit of representation. The place of the former parliament has been taken by the representatives of corporations.

Sixth, the entire country, under Fascism, must be organized like an army. There must be a commander-in-chief, a leader. A place must be found for every citizen. There must be a plan. Every occupation, every economic activity must be coordinated with all others. This means that jobs must be found for all and that the social, political, and economic systems must be regulated and directed from the top. Planned and conscious supervision must take the place of individualism, freedom of enterprise, and competition. This is the essence of Fascism—that it abandons a competitive self-regulating economy and attempts to main-



tain and control a corporate capitalism by force. This constitutes the source of its greatest weakness. In parliamentary countries statesmen and politicians can always point out that since the state does not operate the economic system it cannot be held accountable for the failures of that system. It is quite impossible for the leaders of a totalitarian state to make use of this argument. Since they do control the system they will be held accountable for its results, both in good times and in bad. This leads to two great pressures. The first is to make the totalitarian state a frankly collectivist society in which the state would own and operate the entire productive system. This would necessitate abolishing private property in productive goods and would constitute a fundamental alteration in the very basis of capitalism whether of the competitive or Fascist type. The other pressure would more likely be felt in bad times. It consists of the temptation for the leaders to divert the people's attention from distressing conditions at home to some foreign military adventure. Both Hitler and Mussolini have already used this device and there is some evidence that the pressure toward a collectivist society is increasing.

Fascism undoubtedly constitutes the most immediate threat to American capitalism. Whether it will prove to be a sufficiently permanent form of organization to constitute a serious threat to the future of world capitalism remains to be seen. There are many who regard it simply as the final stage of capitalism which temporarily holds the center of the stage by force while a new collectivist cultural pattern is in the process of emerging.

2. **SOCIALISM:** There are many different types of socialism. They range all the way from a mild form of Christian Socialism or utopian dream to a violent form involving the revolutionary overthrow of the government and the establishment, by force, of a new type of economic and political system. In between these two extremes there are various forms of Gild Socialism, State Socialism, Fabian

Socialism, and the like. The specific differences between all these various types do not concern us here. We must find those common factors which characterize Socialism in general.

The first and chief characteristic is that Socialism would abolish private property in production goods. Socialists, like others, have observed that the total physical output of the industrial system is relatively small when compared with the potential capacity. They feel that our modern technology is so advanced and that the equipment of modern industry is so efficient that we could produce enough goods to provide everyone with an adequate standard of living if we only organized things correctly. They point out that there are a number of things the matter with our present methods.

Competition, they say, is extremely wasteful. Four gasoline filling stations are built where one could handle all the business. There are three or four times as many milk trucks as would be needed if milk delivery were organized like mail delivery. Enough brick kilns, shoe factories, and steel mills are built to produce twice as much as can be sold. There are a great many more retail and wholesale shops than needed for efficient distribution. Socialists claim that these wastes cannot be eliminated until competition is replaced by a planned system of production and distribution.

The private profit motive is also very wasteful when it is permitted to express itself freely. Socialists point, for example, to inefficient utilization of natural resources. Freedom of enterprise in a profit-motivated society has resulted in the adoption of those policies which produce the greatest profits in the short run without any adequate consideration for the future. For example, the great natural-timber resources of this continent have been and are still being wasted by the ruthless cutting for lumber and pulp, without replanting to insure a future supply. The private companies interested in immediate profits have taken only

the most suitable timber and have wasted much. In order to produce immediate profits, coal, minerals, and oil are also being shamefully wasted. The Socialists point out that the elimination of private profit-seeking enterprise in these fields would permit a wise program of conservation and the effective use of natural resources.

The abolition of the private ownership and operation of natural resources and productive goods would make way for the public ownership of these facilities through the mechanism of the Socialistic state. Under such ownership they would, supposedly, be operated not for the profit of private individuals but for the welfare of the whole group. Socialists differ greatly among themselves as to how they think this group ownership of property ought to be achieved. Moderate Socialists favor a program of gradual change in which the state would slowly expand its functions by purchasing business concerns from their private owners. Radical Socialists favor a program of rapid change in which their group would produce a violent revolution, seize the government, and confiscate all productive property. However, all Socialists agree upon the necessity of socializing the ownership of productive industries and natural resources.

The second characteristic of Socialism is emphasis upon the necessity of planning. Since freedom of enterprise and competition are abandoned in the field of production the economic system must be controlled in some other way. This is to be provided by experts who will devise a plan for each industry and a master plan for all the industries of the country. After an examination of the productive facilities of the country and the needs of the people each industry would be assigned a quota. It would then be the job of the hired manager in each factory to see to it that his factory met its quota just as they now do for their private owners. Remarkably few technical changes in the methods of industrial operation would be required. The principal differences which would be introduced by the new

ownership would be in the sphere of policy making. Policies would be determined with an eye to keeping unemployment to a minimum and production of needed goods to a maximum instead of with an eye to keeping profits and dividends to a maximum as at present, even though it involves the curtailment or stoppage of production. Socialists like to say that under their system production would be for use not for profit.

The third characteristic of Socialism is an emphasis upon less inequality in the distribution of wealth and income. Socialists feel that people who do not work have no right to eat. They would attempt to put the idle classes to work under their system. They feel that it is unjust for some people to be permitted to live without working simply because they can get large sums of money as dividends on their stock, interest on their bonds, or rent on their land. This condition will be changed under Socialism. Since private corporations will be replaced by government ownership there will be no stock and no dividends. Since land will be socially owned rent will go to the group, that is, to the government. Some bonds will probably continue to exist, particularly government bonds. Socialists, however, would see to it that no one became sufficiently wealthy by bond ownership to live on the interest. Private fortunes, if socially earned, would be limited to the life of the original maker by confiscatory inheritance taxes and all incomes not actually earned by effort would be subject to heavy taxes. Socialists do not favor complete equality in possessions or income. They recognize that individuals have varying degrees of skill and ought to be rewarded according to their productivity. They also believe that most of the glaring maldistribution of income and wealth which now prevails is a result of the way in which our economic system is organized. They point out that practically all great fortunes are a result of private ownership and control of natural resources or productive facilities such as mines, railroads, or factories. When these have been brought

under socialized ownership they believe that the differences in income and wealth will approximate the actual differences in individual productivity.

Socialism thus appears to be a modified economic system, retaining democratic political institutions and a representative form of government in which social ownership of productive facilities and expert technical planning are relied upon to bring an increased volume of production and a more equitable distribution of income and wealth. It does not involve either the complete control of the distribution of goods or a dictatorship and it is not necessarily introduced by a violent revolution.

3. COMMUNISM: The great country of Russia with over 165,000,000 people and one-sixth of the earth's land area now has a type of politico-economic system which is generally regarded as communistic. It exhibits many of the characteristics of Socialism and shows a few similarities with Fascism. Long and bitter discussions have been conducted concerning the theory of Communism and as to whether Russia has followed the theory. We need not enter the discussion. Those who are interested will find a staggering amount of literature awaiting them.

Perhaps the chief difference between Socialism and Communism is that the latter involves not only social ownership and control of the means of production but also complete ownership and control of the means of distribution. The Russian government has adopted the means necessary to control not only the physical distribution of goods, which is accomplished by state stores, but also the social distribution of the total national income. Not only does the state sell groceries and dry goods directly to individual consumers but it also determines what proportion of the country's production shall go into heavy industries, such as tractors, steel ingots, and the like, and what proportion shall go into consumption industries producing dresses, chairs, bathing suits, bicycles, and the like. It also determines what proportions of the total social income

shall be received by the various producing groups such as farmers, industrial workers, administrators, and professional people.

Such complete governmental ownership and control of all aspects of the economic system requires every adjustment to be made through government agencies. This means a complete and thorough system of expert planning. Every detail of soviet life is planned. There is a plan for every industry. There is a quota for every factory and farm. The needs of all types of citizens are analyzed and the resources and technology of the nation directed in terms of them. The survey of requirements and equipment is the work of a myriad of local regional officials headed by a central planning commission. Here everything is coordinated and long-range programs are mapped out.

Another of the characteristics of Communism which distinguishes it from Socialism is its revolutionary philosophy. The "Communist Manifesto" challenged the dominant capitalistic system with these words, "Communists scorn to conceal their view and purposes. They declare openly that their aims can be obtained only by a violent overthrow of the existing social order. . . ." Communists regard the gradualism of the mild Socialists with contempt. The constitutional measures of legitimate political parties they dismiss with a gesture. It is their belief that the ruling class will not give up its power and its possessions without a fight. If violence, bloodshed, and death are necessary in order to obtain a better society then they will prepare for the inevitable revolution in which the working class (proletariat) will rise and destroy the class which uses its economic power to exploit the workers.

A third characteristic of Communism which distinguishes it from Socialism is the form of government to be established after the revolution. This is to be a dictatorship in the interests of the proletariat. There is no pretense of political democracy. There is no effort to maintain and guard the civil liberties which are so highly prized in

countries with representative governments. Like Fascist states, the Russian state is totalitarian. It will tolerate no opposition; it will permit no criticism save self-criticism. It does not grant its citizens freedom of speech, freedom of press, or freedom of assemblage. The Communist party is the dominant party in Russia, in fact it is the only party, and it dominates the government. Even literature, art, and drama must be acceptable from the point of view of party doctrine, or they will be suppressed. The totalitarian principle requires that all thought and all behavior must be in strict conformity with the dictates of the Communist state.

A characteristic of Russian Communism which has distressed the entire Christian world is its anti-religious attitude. Religion is looked upon as the "opiate of the people." The Communists say that religion as administered by the organized church has been used to keep the attention of the exploited masses centered upon salvation in some future world rather than upon the distressing conditions in this one and the means for remedying them. Many Russian churches have been turned into anti-religious museums in an effort to educate the people for a scientific society.

Communists are characterized by a belief in the inevitable collapse of the capitalist society. They think that it is steadily moving toward a final cataclysm from which it will never recover. They believe that depressions will increase in frequency and duration until the foundations of capitalism are shattered beyond rebuilding. Of course, they hope that the workers (non-property owners) will seize the technology of capitalism before complete collapse occurs. To further the inevitable they strive to educate the workers of capitalistic countries to unite and throw off the chains of bondage. Furthermore, they give succor and aid to any force which will produce capitalistic disintegration. In case capitalism finds some serum which will arrest the progress of the dread paralysis and stave off depression and the impending cataclysm, the Communists contend

that the end will come in the next world war. They believe that war is inevitable for they feel certain that the capitalists will attempt to cure their sick society by putting the unemployed into the army and by setting their idle factories to the production of war materials. Communists hope that the capitalistic countries will fight each other to exhaustion, thus producing the cataclysm they have been expecting. This would prepare the ground for the proletarian revolution and the proletarian dictatorship over a classless society composed only of workers.

It cannot be questioned that Russia looms like a dark cloud upon the horizon of the capitalist world and that it has thrown its shadow upon the future. It has industrialized a great area at the fastest pace in the history of civilization. It has transformed its population from an illiterate peasantry into the greatest reading public in the world. It has practically solved the problem of unemployment. It has built the greatest defensive army and air force in all history. It has adopted a new constitution and promises a more democratic government. It expects to be attacked by the Fascist powers in Europe and by Japan in Asia. If Fascism is, as many believe, the last stage of capitalism and a passing phase in cultural history, then Communism may hold the seeds of a new world culture.

The important thing to remember, no matter what comes to pass, is that the cultural pattern of the future will not be any form of regulation or collectivism known today. Before any present nucleus of opposition to capitalism, such as Communism or Fascism, can become a dominant cultural pattern it must develop a new unified and homogeneous ideology and new institutions. It cannot depend for its growth upon the retention of existing ideologies or institutions either within or without its framework. Perhaps science and technology will develop a philosophy which will serve as a nucleus for the evolution of a new cultural pattern. Modern technology now holds the key to a better life for all people. Some cultural frame-



work will be found which will release the bounties now promised by modern technology. Exactly what it will be remains the secret of the future.

### STUDY QUESTIONS

1. Briefly discuss the development of the chief prerequisites of modern capitalism. Which of these are most important in the rise of industrial capitalism? What new functions did the owners of capital assume under the factory system?
2. Distinguish commercial, financial, and industrial capitalism. Why did commercial and financial capitalism arise before industrial? Compare the origins, development, and problems of pre-industrial capitalism with those of industrial.
3. Distinguish capital, capitalistic, capitalism, and capitalization. What is the economic significance of each? Which are most concerned with the material aspects of culture? With the non-material or psychological? Why?
4. Of what significance are each of the following in the rise of modern industrial capitalism: slavery, the proletariat, technology, science, money? What is technology? How does it differ from science? Is capital necessary to its existence?
5. What are the chief features of capitalistic ideology? Where did they originate? Evaluate the importance of each in the rise of corporate capitalism.
6. What are the basic institutions of modern capitalism? The supporting institutions? What determines their structure? Analyze modern capitalism from the standpoint of foundations, structure, and spirit.
7. Are rationality and competition compatible? What is rational behavior? Is all calculation rational? Is rationality an essential feature of other cultures? Why?
8. Compare the early and modern forms of capitalistic enterprise. What is the most obvious difference? Where does the power of modern manipulators arise?
9. Distinguish manipulation, production, and acquisition. Give current examples of each. Which is the more pervasive? Which affords the greatest social gain? The greatest differential gain?
10. List and evaluate the basic social consequences of industrial capitalism? Which are most directly connected with the leading economic problems of today?
11. Contrast the controlling classes of modern industrialism with those of feudalism. Compare the typical occupations of industrialism with

those of feudalism. What fundamental changes in culture do these comparisons reflect?

12. What characteristics of the modern corporation have played the most significant role in changing the structure of the economic system? Does the term *laissez faire* correctly describe our present economic order? Why?
13. Which, if any, of our great modern economic problems are inherent in the present cultural pattern? Why?
14. Why is the distribution of income so unequal in modern capitalism? Should it be equal? What social and economic consequences result from the existing inequalities?
15. Does the modern worker enjoy more or less security than workers in previous cultures? What are the principal threats to his security? What individual and what social action may contribute to greater security?
16. Compare the chief characteristics of: Fascism, Socialism, and Communism. Wherein are they similar? What constitutes the greatest strength and the greatest weakness of each? Does any one of them constitute a new cultural pattern?
17. What must appear before a new cultural pattern can be said to exist?

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## GENERAL REVIEW QUESTIONS

1. Identify each of the following: culture, social milieu, social process. How are they related? Discuss the roles of invention, discovery, and diffusion in social change.
2. Compare Paleolithic with Neolithic culture on basis of: man's abilities, techniques, social controls. What important aspects of modern economic society can be traced back to primordialism? Which was the more important, physical environment or social environment, in shaping primitive cultures? Feudalism? Modern industrialism? Explain.
3. Why are institutions so important in explaining feudalism? Enumerate and discuss modern significance of the feudal hierarchies. What features of the medieval Church gave it such power over the life of its times?
4. When and how did each of the following originate: the economic surplus, exploiting classes, agriculture, dual morality, "free" labor, charters, money economy, and joint-stock organization?
5. Discuss and compare two of the following in relation to the economic life of its time: Curia Regis, manorial courts, borough courts, pie powder courts.
6. How well did the manor meet the economic and social needs of the eleventh-century serfs? Nobility? Evaluate the gild system from the standpoint of: production, education, social welfare. Explain the meaning, operation, and social significance of "just price." What is its nearest modern parallel?
7. How did the Crusades lay the basis for the Commercial Revolution and the rise of capitalism? List and briefly describe the principal phases of the Commercial Revolution. What were the principal commercial, financial, and social changes which attended it.
8. What is a prerequisite? What are the prerequisites for the rise of capitalism? Trace the origin of each. In what sense was Mercantilism an expansion of gild policies? Discuss Mercantilism from the standpoint of origins, principles and practices, decline, and social significance. Discuss the origin, features, and economic significance of the domestic system. Why did it appear first in the cloth industry?
9. What is the cultural significance of the technical backgrounds of the Industrial Revolution? Why are engines more important than machines in explaining the technical changes of the Revolution? What social effects are still problems today?
10. Contrast the following features of feudalism and industrial capitalism: ideology, classes, occupations, sources of productive power,

basic institutions. What features in modern society are the direct result of industrialism? Is capitalism an inevitable accompaniment of industrialism?

11. List and evaluate the problems resulting from the breakdown of significant parts of capitalism. What efforts have been made to solve them in the United States?
12. Compare the institutional framework of Fascism, Socialism, and Communism. What must be developed before any one of these can constitute a new cultural pattern?
13. How do economic forces condition cultural change? What are the most enduring aspects of culture?
14. List and compare the contributions of the four great cultures to modern economic society. Evaluate the role of each culture in the process of cultural change.





# Index

## A

Abilities, Paleolithic, 51  
 Ability, nature and function, 51  
 Abode, Paleolithic, 40  
 Accounting, 385-387  
 Acquisition (*see* Gain)  
 Administration, corporate, 496-500  
 Advertising, competitive, 499  
 Aeolipile, described, 425  
   pictured, 427  
 Age of Discovery, 315-318  
 Agricultural feudalism, 133-186  
 Agriculture, bourgeois, 363-375  
   technical changes in, 371-375  
 Aids, feudal types, 151  
 Alliance, Lübeck and Hamburg, 278  
 Alodial share, 134  
 Animals, domestication of, 81-84  
   (*See also* Fauna)  
 Anti-trust legislation, 518  
 Apprenticeship, 210  
 Armies, as a market, 346-347  
   rise of modern, 341-344  
 Art, Paleolithic, 68-70  
   Neolithic, 102  
 Artifacts, 24  
 Artisans, manorial, 155  
 Associations, family, 377

Astrolabe, 334

Atmospheric power, 426-439  
 Atomistic, term explained, 486, 491  
 Attitudes, defined, 43  
   feudal town, 226-229  
   manorial, 156  
   Neolithic village, 107-109  
 Auctions, 393  
 Aurignacian implements, 57

## B

Bailiff, 161  
 Banking, regulation of, 517  
   rise and functions, 396  
 Barb, importance of, 65  
 Beliefs, mythological, 47  
 Black Death, 177-180  
   effects, 178  
   nature and types, 177  
   in rise of capitalism, 361  
   significance, 180  
 Blincoe, Robert, story of, 450  
 Bolas, 63  
 Bone, as implement material, 57-59  
 Bookkeeping (*see* Accounting)  
 Boon-work, 153  
 Bourgeois control of capital, 355

- Bourgeoisie, ascendancy of, 329-331  
     in colonization, 321  
     in Commercial Revolution, 311, 328  
     nationalism aided by, 332  
     sources of, 330  
 Bow and arrow, 64  
 Branca, Giovanni, 427, 428  
 Branch houses, 379  
 Breeds, improvements of, 373  
 Brindley, 454  
 Bull, William, 438  
 Burgage tenure, 194  
 Business associations, 377  
 Business cycles, 459  
 Business forms, nascent, 376-379  
 Business techniques, accounting, 385-387  
     capital accumulation, 387-392  
     marketing, 392-394
- C
- Canals, 454  
 Capital, defined, 474  
 Capital fund, bourgeois control of, 355  
     early examples, 388  
     origin and uses, 387-392  
     as prerequisite, 354  
 Capitalism, industrial, 468-532  
     meaning, 476  
     nascent, 353-413  
     socialist criticism of, 525  
 Capitalistic, term defined, 475  
 Capitalization, defined, 477  
 Cartography, 337-340  
 Cathedrals, 188  
 Cattle, improved breeds of, 373  
 "Cave man," 40  
 Caves, formations of, 32  
 Campaign fairs, 269  
 Chartered companies, capital accumulation, 389  
     colonization, 321  
     examples, 384  
     features, 380  
     types, 381  
 Charters, first, 138  
     grantors, 190-192  
     provisions, 192-195  
     town, 190-195  
 Charts and maps, 340  
 Child labor, in factory system, 449-451  
 Chipping (*see* Flaking)  
 Christian concepts, 220-224  
 Chronology, Neolithic, 77  
     Paleolithic, 25  
 Chronometer, 336  
 Church, affected by Crusades, 261  
     charters granted by, 191  
     function in medieval trade, 188  
     great schism, 248  
     manorial, 164  
     in rise of feudalism, 135  
     role in Crusades, 247-249  
     separation from state, 136  
 City, origin of, 457  
 Clan, defined, 37  
 Class hierarchy, 141  
 Classes, economic vs. social, 119  
     manorial, 149-155  
     Neolithic, 114  
     origin, 70  
     as social control, 71  
 Classical civilizations, 126*ff.*  
 Clergy, on the manor, 155  
 Climate, elements of, 27  
     Neolithic, 77-79  
     Paleolithic, 27  
 Clipping of coins, 242, 395  
 Closes, manorial, 147  
 Clothier, 399  
 Clothing, manorial, 169  
     Neolithic, 106  
 Clover, in crop rotation, 372  
 Coastline of prehistoric Europe, 31  
 Collectivism, 520-531  
 Colonial exploitation, 320-322  
 Commerce, in capitalism, 375-394  
     in feudal towns, 188  
 Commercial feudalism, 238-306  
 Commercial Revolution, 309-352  
 Commercial shifts, 322-324  
 Commission houses, 379

- Commitatus, 134  
 Commodities, affected by Commercial Revolution, 323  
     Hanseatic, 286  
     sold at fairs, 267  
 Common fields, 144-146  
 Common law, 164  
 Common pasture, 146  
 Communism, 528-532  
 Commutation of services, contributing factors, 175  
     effects of Black Death upon, 180  
     effects of towns upon, 196  
     prerequisites, 174  
     process of, 176  
     significance, 177  
 Compass, 334  
 Competition, effect of technology upon, 451  
     as organizing force, 481  
     socialist criticism of, 525  
     among workers, 452  
 Compound steam engine, 440  
 Condenser, in steam technology, 435  
 Conquest, 340-347  
 Conservatism, manorial, 156  
     Paleolithic, 44  
 Consumption habits, 324  
 Continental elevation, 30  
 Contract buying, 394  
 Copernican theory, 421  
 Copyholders, 365  
 Core tools, defined, 53  
 Corporate state, 523  
 Corporation, 492-500  
 Cottars, manorial, 154  
 Counters, Hanseatic, 282-285, 289  
 Coup de poing, 54  
 Courts, manorial, 162-164  
     pie powder, 265-267  
     royal (*Curia Regis*), 139  
 Craft guilds, 202-217  
 Craftsmanship, 228  
 Cro-Magnon man, 35, 41  
 Crop rotation, 371-373  
 Cross-staff, 334  
 Crusades, 246-261, 359  
 Cultivated plants, 85  
 Cultivation, techniques and tools, 85-91  
 Cultural change, 16  
 Culture, basis for new, 531  
     defined, 5  
     elements of, 7  
     relation to economics, 3  
*Curia Regis*, 139  
 Currency, in medieval trade, 242  
 Custom, 42, 155
- D
- De Causa, Solomon, 428  
 Defense, in rise of towns, 188  
 Della Porta, Giovanni Battista, 427, 428  
 Demesne land, 143  
 Democratic ideology, 136  
 Denmark, relation to Hanseatic League, 278-280  
 Descartes, Rene, 421  
 Determinism, economic, 310  
 Dictatorial ideology, 136  
 Dictatorship, communistic, 529  
     fascistic, 522  
 Diffusion, 15  
 Digging stick, 86, 87  
 Discovery, age of, 315-318  
     nature of, 12  
 Dismemberment of prey, 63  
 Distaff, 105  
 Distribution of wealth, 503-512  
 Division of labor, 442  
 Documents, prehistoric, 24  
 Domesday survey, 139  
 Domestic system, 398-403  
 Domestication, of animals, 81-84  
     of plants, 85  
 Drafts, commercial, 397  
 Dress, feudal, 232  
 Dual government, church and state, 137  
 Dual morality, 122, 157  
 Dual nobility, 138

## E

**Economic activity, factors conditioning, 4**  
**Economic determinism, 310**  
**Economic power, concentration of, 511**  
**Economic surplus, claims upon, 120**  
     nature of, 117-119  
     as prerequisite, 354  
**Economics, cultural approach to, 4**  
     nature and scope of, 3  
     relation to culture, 18  
**Education, craft gild, 210**  
     feudal types, 225  
**Elevation, continental, 30**  
**Enclosure movement, early (sixteenth-century), 363-367**  
     later (eighteenth-century), 367-371  
**Enclosures, 362-373**  
**Endogamy, relation to tribe, 38**  
**Engines, atmospheric, 426-439**  
     classical, 425  
     experimental, 425-429  
     gunpowder, 427, 428  
     Newcomen, 433  
     Papin, 431  
     practical, 429  
     projectors, 426-429  
     Savery, 430  
     steam, 439-441  
     Watt, 434-439  
**English leadership, in Industrial Revolution, 441**  
**English merchants, 290-295**  
**Engrossing, 207**  
**Enterpriser vs. corporation, 496-500**  
**Entrepreneur, in capitalism, 486, 496-500**  
     in domestic system, 399  
     in gild decline, 214  
**Environment, physical, Neolithic, 77-80**  
     Paleolithic, 26-33  
**Equality, craft gild, 206-209**  
     Neolithic village, 108  
     small town, 109

**Evans, Oliver, 436, 440**  
**Evolution vs. revolution, 9**  
**Exfoliation, of feudalism, 319**  
**Exogamy, relation to tribe, 38**  
**Exploitation, in the New World, 320-322**  
**Exploration, chief voyages, 315-318**  
     early, 312  
     techniques, 333-340

## F

**Factor, as agent, 378**  
**Factory system, 447**  
**Fairs, 262-270**  
**Fallow-field system, 158, 170**  
**Family, as business unit, 377**  
     as economic unit, 505  
**Famines, 361**  
**Fascism, 520-524**  
**Fauna, Neolithic, 79**  
     Paleolithic, 33, 61-66  
**Features of industrialism, 483-489**  
**Feudal tolls, in medieval trade, 241**  
**Feudalism, decay of, 319**  
     economic origins, 136  
     effects of Crusades, 260-  
     historical backgrounds, 133-142  
     sources of unity, 133  
     superstructure of, 140  
**Fief, nature of, 140**  
**Finance, banking, 396**  
     money changing, 394-396  
     payment by draft, 397  
**Fire, significance of, 38, 57**  
**Firm, 378**  
***Firma Burgi* (town rent), 193**  
**Fishing, 65**  
**Flake tools, defined, 53**  
**Flaking, feather edge, 55**  
     Neolithic, 93  
     percussion, 53-55  
     pressure, 59  
     resolved, 55  
     retouch, 55  
**Flint, as a tool material, 53**  
**Flint mining, 95**  
**Flora, Neolithic, 79**

Food, feudal towns, 232  
     manorial, 168  
 Forestalling, 207  
 Fossils, defined, 24  
 Fraternal functions, craft gilds, 211  
     merchant gilds, 201  
 Free labor, compared to serf labor, 197  
 Freedom of enterprise, 485  
 Freeman, feudal, 150-152  
 Functions, gild, civic, 201  
     educational, 210  
     fraternal, 201, 211  
     mutual aid, 211  
     recreational, 211  
     regulatory, 200, 206-210  
 Futures, dealing in, 393

## G

Gain, as goal of capitalism, 478-480  
 Gain spirit, 328  
 Galileo, role in Industrial Revolution, 420  
 Genius, nature of, 12  
 Genoa, role in Crusades, 250, 253  
 George, Henry, 459  
 Gild rules, 218-220  
 Gilds, list of, 229  
 Glaciation, 27-29  
 Glebe, 143  
 Goals, social vs. individual, 17  
 Gold discoveries, 318  
 Governmental regulation, banking, 517  
     industry, 519  
     necessity for, 462  
     railroads, 517  
     utilities, 518  
 Governor, centrifugal, 432, 437  
 Grand jury, 163  
 Grand trade (*see* Inter-regional trade)  
 Grantors, of charters, 190  
 Grants, as basis of fairs, 263  
 Great companies, 215  
 Grinding and polishing, Neolithic, 92  
     Paleolithic, 57

Group, in cultural change, 13  
 Gunpowder, 342

## H

Hafting, 90, 93-95  
 Hanseatic assemblies, 280  
 Hanseatic commodities, 286-288  
 Hanseatic League, 270-290  
 Hanseatic towns, 285  
 Harpoon, 60  
 Harvesting, 89-91  
 Heautefeuille, De, Jean, 427-429  
 Heidelberg man, 34  
 Hero, 425  
 Hoe, 87, 88  
 Hoe culture, 88  
 Holding company, 493  
 Home vs. factory, 446  
 Homes, castles, 167  
     huts, 164-166  
     lake villages, 113  
     manor houses, 166  
     pit dwellings, 111  
     post houses, 112  
     town, 231  
*Homo sapiens*, 35  
 Hornblower, Jonathan, 440  
 Houses (*see* Homes)  
 Hundred Years' War, 359  
 Hunting, magic in, 66, 69  
     mythology of, 46  
     Paleolithic, 61-66  
 Hunting culture, 23-76  
 Hunting pack, 61  
 Husbandry, animal, 81-84

## I

Ideology, of decaying culture, 422  
     of industrialism, 478-482  
     manorial, 173  
 Implements, Mousterian, 56  
 Neolithic, 92-100  
     Paleolithic, 53-61  
     relation to classes, 100  
     Upper Paleolithic, 57-61  
 Income, family distribution, 505  
     property vs. labor, 504

Individual, in hunting pack, 41  
 Individual initiative, 486  
 Individualism, 460-462  
 Industrial capitalism, 468-539  
 Industrial Revolution, 417-467  
 Industry, localization of, 448  
     regulation of, 518-520  
 Inequality, social significance, 506-512  
 In-group vs. out-group, 122, 227  
 Initiative, in capitalism, 486  
 Inspectors, of craft guilds, 204  
 Insurance, social, 515  
 Intellectual Revolution, 418-422  
 Interglacial periods, 28  
 Inter-regional trade, feudal, 245-295  
 Intolerance, 44  
 Invention, conditioned by group, 13-15  
     nature of, 11  
     relation to diffusion, 6

## J

Joint-stock company, 381-383  
 Journeyman guilds, 215  
 Journeymen, 210  
 Just price, 209, 220-223

## K

Kings, grantors of charters, 190  
 King's court, 190  
 Kinship, 38  
 Knowledge vs. magic, 66

## L

Labor, serf vs. free, 197  
 Laissez-faire, nature and functions, 487-489  
     reaction to mercantilism, 408  
 Lamps, Magdalenian, 41  
 Land, in villeinage, 144  
 Land bridges, 30, 31  
 Land tenure, feudal institution, 140  
     types on manor, 143  
 Latin states of Syria, 254

Latitude, determination of, 335-337  
*Laurentian Portolano*, 312  
 Lavellois flake, 54-56  
 Lex mercatoria, 267, 296-298  
 Limestone ridges, 31  
 List of guilds, 229-230  
 Livery companies of London, 216  
 Local autonomy, feudal, 194  
 Local trade, feudal, 244  
     (See also Urban Feudalism)  
 Loess soil, 32  
 Longitude, Board of, 336  
     determination of, 335-337  
 Loom, 105  
 Lord, manorial, 150  
 Loyalty, Paleolithic attitude, 44

## M

Macadam, John, 454  
 Machine technology, 442, 469  
 Machinery, agricultural, 374  
 Magdalenian (Upper Paleolithic), implements, 59-61  
 Magic, 66-70, 73  
 Maldistribution of wealth, 503-512  
 Manipulation, 473  
 Manor, 143-164  
 Manorial (see Classes; Homes; etc.)  
 Map making (see Cartography)  
 Marital relations, primitive, 37  
 Marketing, 392-394  
 Markets, expansion of, 344-347, 455  
     feudal, 244  
     modern urban, 470  
     significance of, 488  
 Masses, capitalistic, 471  
     Temple Town, 123  
 Meager trade, reasons for, 239-244  
 Medicine man (see Shaman)  
 Mercantile privileges, 193  
 Mercantilism, 404-405  
 Merchant adventurers, 294  
 Merchant guilds, 198-202  
 Merchant (Hanseatic) League, 270-277  
 Merchants of the staple, 293

Metamorphosis, of industrialism,  
489-492  
Microliths, 89-91  
Migrations, Neolithic, 79  
Paleolithic, 26  
Temple Town, 116  
Mining, modern, 453  
Neolithic, 95  
Mystery plays, 203  
Monasteries, dissolution of, 188  
in rise of towns, 216  
Money changing, 394-396  
Money economy, 325-329  
Monopoly, craft gild, 206  
Hanseatic, 289  
Morality, dual concept of, 122  
Moslem activity, in Commercial  
Revolution, 313  
Mousterian man, 35  
Mythology, 45-50, 68, 73

## N

Nascent capitalism, 353-414  
Nationalism, nature and phases,  
331-333  
relation to Hanse, 288  
role in rise of capitalism, 356-358  
Navigation, techniques and devices,  
334-337  
Neanderthal man, 35, 40  
Neolithic, classes, 114  
climate, 78  
dwellings, 109-114  
migrations, 116  
Neolithic villages, lake types, 113  
land types, 111-113  
Newcomen, Thomas, 433-434, 436  
Newton, Sir Isaac, 421  
Nobility, dual, 138  
English feudal, 149  
Nomads, 116  
Normans, role in Crusades, 247

## O

Occupations, gild, 229-231  
Officials, petty manorial, 161

Orderliness, on manor, 157  
in Neolithic village, 107  
Out-group vs. in-group, 122, 227  
Oversaving, 510-512

## P

Pack life, 41  
Paleolithic culture, divisions, 25  
Papacy, 247  
Papin, Dennis, 431-433  
Personal freedom, in town, 193  
Petty trade, 244  
(see also Local trade)  
Physical environment, Neolithic,  
77-80  
Paleolithic, 26  
relation to culture, 8  
Physical hindrances, to medieval  
trade, 243  
Pie powder courts, 265-267  
Pitldown man, 34  
Piracy, 390-392  
Pitfall, 62  
*Pithecanthropus erectus*, 34  
Planning, capitalistic, 519  
socialistic, 526  
Plough, 87-89  
Polishing, 57  
Population, effects of Industrial  
Revolution upon, 456  
Post-glacial period, 29  
Pottery, 100-104  
Poverty, result of Industrial Revolution,  
459  
Prehistoric Cultures, reasons for  
study, 23  
sources of information, 23-25  
Prey, Paleolithic, 61-66  
Price control, administrative, 496-  
500  
Price revolution, 325-329  
Price system, as prerequisite of  
capitalism, 355  
Prices, flexible vs. rigid, 496-500  
Pricing, 473  
Priest (Shaman) class, 120



- Primitives, nature and significance, 25  
 Printing, 314  
 Private property, in capitalism, 483  
     in Communism, 528  
     in corporation, 495  
     in socialism, 525  
 Privateering, 390  
 Profit motive, 484  
 Progress, the concept, 17  
 Projectors, 423  
 Proletariat, 471  
 Property rights, basis for classes, 119-124  
     in factory system, 452  
     Neolithic respect for, 107  
     origins of, 119  
     relation to income, 503  
 Protection in mercantilism, 404-407  
 Provincialism, in feudal towns, 227  
     on manor, 157  
 Proxies, use of, 495  
 Puberty rights, 38  
 Public ownership, under socialism, 526
- Q
- Quadrant, 337  
 Quern, 91
- R
- Races, modern, 36  
     primitive, 34-36  
 Railroads, 455, 517  
 Rationalism, 420  
 Rationality, in capitalism, 480  
 Recreations, feudal, 211, 233, 268  
 Reeve, manorial, 161  
 Reformation, relation to capitalism, 361  
     relation to Crusades, 261  
 Regimentation, 446  
 Regrating, 208  
 Regulated companies, 381  
 Regulation, governmental, 516-520  
 Regulatory functions, craft guilds, 206-210  
     Merchant guilds, 200  
 Reliefs, feudal, 151  
 Religion, in feudal town, 224  
 Religious fraternities, 204  
 Renaissance, in Commercial Revolution, 314  
     in rise of capitalism, 361  
 Respectability, 109  
 Revolution, compared to evolution, 9  
     nature and significance, 309  
     in prices, 325-329  
 Rites, magical, 68  
 Road building, 454  
 Roman decline, as feudal origin, 133  
 Routine, manorial, 170-174  
 Royal Society of London, 424
- S
- Safety valve, 431, 432  
 Saracens, contributions, 255-257  
 Savery, Thomas, 427, 430  
 Saving, 508-512  
 Scarcity, in capitalism, 474  
 Seasonal unemployment, 514  
 Seneschal, manorial, 160  
 Serf labor vs. free, 197  
 Service, role of, in feudalism, 238  
 Sextant, 337  
 Shaman, director of puberty rites, 38  
     functions in Temple Towns, 120  
     keeper of fire, 39  
     origin, 45  
     role in magical rites, 69-72  
     workshop of, 40  
 Shifts, in commodities, 323  
     in consumption habits, 324  
     in trade, 322  
 Sickle, 89  
 Sketch books, 423  
 Skill, affected by machines, 445  
     defined, 52  
 Slavery, negro vs. industrial, 449, 458  
     significance, 124

Slavery, Temple Town, 123  
 Sling, 62  
 Social change, nature and types, 9-11  
     process, 16  
 Social control, capitalistic, 403-409  
     *Curia Regis* as, 139  
     defined, 41  
     feudal, 217-229; 295-298  
     magic as, 66-70  
     manorial, 155-164  
     Neolithic, 107-109  
     Paleolithic, 41-45  
 Social disorganization, 458-460  
 Social environment, relation to culture, 8  
 Social goals, 17  
 Social heritage, 10  
 Social insurance, 515  
 Social milieu, 7  
 Social organization, factors conditioning, 36  
     Neolithic village, 106-114  
     Paleolithic, 36  
     relation to mythology, 50  
 Social process, in feudalism, 164-174; 229-233  
     nature of, 8  
 Social relations, 231-233  
 Social security, 512-516  
 Socialism, 524-528  
 Societies, scientific, 424  
 Soldier class, 114  
 Solutrean implements, 58  
 Spade, 87, 88  
 Specialization, 442  
 Specie, 318, 325  
 Spindle, 105  
 Spinning, 104  
 Spirit world, as basis of mythology, 46  
     evidences of, 49  
 Staple towns, 292  
 State vs. Church, 135  
 Status, feudal, 238  
 Status quo, justified by mythology, 50

Steam engine, compound, 440  
     double acting, 437-439  
     evolution of, 425-441  
     first pressure, 440  
     later types, 439-441  
 Steelyard, 284  
 Steward, manorial, 160  
 Supernatural, nature of, 46  
 Sweating, of coins, 242, 395  
 Symbolism, in magic, 70

## T

Taxes, relation to savings and income, 509  
 Technical changes in agriculture, 371-373  
 Technical devices, conditioned by cultural pattern, 425, 438  
 Technical origins of Industrial Revolution, 422-441  
 Techniques, manorial, 157-160  
     Neolithic, 92-96  
     Paleolithic, 52-61  
 Technological unemployment, 511-513  
 Technology, cultural significance, 531  
     evolution of, 56  
 Telford, Thomas, 454  
 Temple Town culture, 115-127  
 Teutonic practices, as origin of feudalism, 134  
 Textiles, early machines, 453  
     medieval trade in, 291  
     origins, 104-106  
 Threshing, 91  
 Thrift, 108, 508-512  
 Tolls and fees, of fairs, 264  
 Tools (*see* Implements)  
 Topography, Neolithic, 77-79  
     Paleolithic, 30-33  
 Totalitarian state, communistic, 530  
     fascistic, 522  
 Totemism, 37  
 Town (Hanseatic) League, 277-286  
 Towns, feudal, 187-217  
     industrial, 457

Towns, Temple, 115-127  
 Trade, centers, 322  
     fostered by Crusades, 259  
     inter-regional, 245-296  
     petty vs. grand, 244-246  
     role in feudalism, 238  
 Tradition, 50  
 Transportation, 454  
 Trevethick, Richard, 439  
 Tribe, defined, 38  
 Tube boiler, 431  
 Turbine, steam, 441  
 Turks, 313  
 Turnips, as fodder, 372

## U

Unemployment, capitalistic problem, 501-503  
     seasonal, 514  
     technological, 511-513  
 Upper Paleolithic implements, 57-61  
 Urban Feudalism, 187-237  
     (*see also* Towns)  
 Urbanization, 456  
 Usury, 223  
 Utilities, regulation of, 518

## V

Vacuum, discovered, 420  
 Vassalage, 140  
 Venetian fleets, 261  
 Venice, during Crusades, 529  
     role in Commercial Revolution, 311

Verhansung, 281  
 Vill, 190  
 Villages, distinguished from towns, 187  
 Village Culture, 77-130  
 Villeins, effects of town life upon, 196  
     manorial types, 152-154  
 Virgate, nature of, 152

## W

Wages, iron law of, 452  
 Warfare, changes in technique of, 341-344  
     rise of capitalistic, 358-360  
 Warrior (military) class, 114, 121  
 Wasteland, manorial, 148  
 Watt, James, 434-439  
 Wealth, distribution of, effects of  
     Industrial Revolution upon, 459  
     inequitable, 503-512  
     socialistic idea of, 527  
 Weapons (*see* Implements)  
 Weaving, 105  
 Week work, 153  
 William the Conqueror, 136-140  
 Women and children, in factories, 449-452  
     in Paleolithic life, 40  
 Woodland, manorial, 147  
 Workers, effects of Industrial Revolution upon, 444-446  
 Working conditions, in craft guilds, 209  
 Writing, 124



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